

November 19, 2002

RE: Hayes Lammerz International 069-16113-00031

TO: Interested Parties / Applicant

FROM: Paul Dubenetzky
Chief, Permits Branch
Office of Air Quality

Notice of Decision: Approval - Effective Immediately

Please be advised that on behalf of the Commissioner of the Department of Environmental Management, I have issued a decision regarding the enclosed matter. Pursuant to IC 13-15-5-3, this permit is effective immediately, unless a petition for stay of effectiveness is filed and granted according to IC 13-15-6-3, and may be revoked or modified in accordance with the provisions of IC 13-15-7-1.

If you wish to challenge this decision, IC 4-21.5-3 and IC 13-15-6-1 require that you file a petition for administrative review. This petition may include a request for stay of effectiveness and must be submitted to the Office of Environmental Adjudication, ISTA Building, 150 W. Market Street, Suite 618, Indianapolis, IN 46204, **within (18) eighteen days of the mailing of this notice**. The filing of a petition for administrative review is complete on the earliest of the following dates that apply to the filing:

- (1) the date the document is delivered to the Office of Environmental Adjudication (OEA);
- (2) the date of the postmark on the envelope containing the document, if the document is mailed to OEA by U.S. mail; or
- (3) the date on which the document is deposited with a private carrier, as shown by receipt issued by the carrier, if the document is sent to the OEA by private carrier.

The petition must include facts demonstrating that you are either the applicant, a person aggrieved or adversely affected by the decision or otherwise entitled to review by law. Please identify the permit, decision, or other order for which you seek review by permit number, name of the applicant, location, date of this notice and all of the following:

- (1) the name and address of the person making the request;
- (2) the interest of the person making the request;
- (3) identification of any persons represented by the person making the request;
- (4) the reasons, with particularity, for the request;
- (5) the issues, with particularity, proposed for consideration at any hearing; and
- (6) identification of the terms and conditions which, in the judgment of the person making the request, would be appropriate in the case in question to satisfy the requirements of the law governing documents of the type issued by the Commissioner.

If you have technical questions regarding the enclosed documents, please contact the Office of Air Quality, Permits Branch at (317) 233-0178. Callers from within Indiana may call toll-free at 1-800-451-6027, ext. 3-0178.

Enclosure

FNPER.wpd 8/21/02



INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

We make Indiana a cleaner, healthier place to live.

Frank O'Bannon
Governor

Lori F. Kaplan
Commissioner

100 North Senate Avenue
P. O. Box 6015
Indianapolis, Indiana 46206-6015
(317) 232-8603
(800) 451-6027
www.state.in.us/idem

November 19, 2002

Mr. Rick Guernsey
Hayes-Lemmerz International, Inc.
1870 Riverfork Drive
Huntington, Indiana 46750

Re: 069-16113-00031
Significant Source Modification to:
Part 70 Permit No.: T069-7421-00031

Dear Mr. Guernsey:

Hayes-Lemmerz International, Inc. was issued Part 70 operating permit T069-7421-00031 on April 16, 2002 for an aluminum wheel manufacturing plant. An application to modify the source was received on June 11, 2002. Pursuant to 326 IAC 2-7-10.5, the following existing emission units are approved for modification at the source:

- (d) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, with a maximum throughput capacity of 6,000 pounds of aluminum per hour, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 EF, exhausting to one (1) stack, identified as S-53. (Constructed in 1996 and modified in 2002)
- (e) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewall furnace, identified as Sidewall Furnace #5 with a combined total maximum throughput of 6,000 pounds of clean aluminum/ingots and aluminum scrap per hour. Sidewall Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 processes aluminum/ingots and exhausts to one (1) stack, identified as S-54, with emissions uncontrolled. Sidewall #5 processes aluminum scrap, and is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996 and modified in 2002)

The source proposed to operate this chip dryer at the full capacity of 6,000 pounds of chips per hour, and to have the flexibility on the amount of clean aluminum/ingots or aluminum scrap input to the Melt Furnace #5 and Sidewall Furnace #5. The maximum capacity of the aluminum input to Furnace #5, including Melt Furnace #5 and Sidewall Furnace #5, maintains 6,000 pounds per hour.

The following construction conditions are applicable to the proposed project:

- General Construction Conditions
 - 1. The data and information supplied with the application shall be considered part of this source modification approval. Prior to any proposed change in construction which may affect the potential to emit (PTE) of the proposed project, the change must be approved by the Office of Air Quality (OAQ).
 - 2. This approval to construct does not relieve the permittee of the responsibility to comply with the provisions of the Indiana Environmental Management Law (IC 13-11 through 13-20; 13-22 through 13-25; and 13-30), the Air Pollution Control Law (IC 13-17) and the rules promulgated thereunder, as well as other applicable local, state, and federal requirements.
- 3. Effective Date of the Permit
Pursuant to IC 13-15-5-3, this approval becomes effective upon its issuance.



4. Pursuant to 326 IAC 2-1.1-9 and 326 IAC 2-7-10.5(i), the Commissioner may revoke this approval if construction is not commenced within eighteen (18) months after receipt of this approval or if construction is suspended for a continuous period of one (1) year or more.
5. All requirements and conditions of this construction approval shall remain in effect unless modified in a manner consistent with procedures established pursuant to 326 IAC 2.
6. Pursuant to 326 IAC 2-7-10.5(l) the emission units constructed under this approval shall not be placed into operation prior to revision of the source's Part 70 Operating Permit to incorporate the required operation conditions.

This significant source modification authorizes modification of the existing emission units. Operating conditions shall be incorporated into the Part 70 operating permit as a significant permit modification in accordance with 326 IAC 2-7-10.5(l)(2) and 326 IAC 2-7-12. Operation is not approved until the significant permit modification has been issued.

Pursuant to Contract No. A305-0-00-36, IDEM, OAQ has assigned the processing of this application to Eastern Research Group, Inc., (ERG). Therefore, questions should be directed to Yu-Lien Chu, ERG, 1600 Perimeter Park Drive, Morrisville, North Carolina 27560, or call (919) 468-7871 to speak directly to Ms. Chu. Questions may also be directed to Duane Van Laningham at IDEM, OAQ, 100 North Senate Avenue, P.O. Box 6015, Indianapolis, Indiana, 46206-6015, or call (800) 451-6027, press 0 and ask for Duane Van Laningham, or extension 3-6878, or dial (317) 233-6878.

Sincerely,

Original Signed by Paul Dubenetzky
Paul Dubenetzky, Chief
Permits Branch
Office of Air Quality

Attachments

ERG/YC

cc: File - Huntington County
Huntington County Health Department
Air Compliance Section Inspector - Ryan Hillman
Compliance Data Section - Karen Nowak
Administrative and Development -Sara Cloe
Technical Support and Modeling - Michele Boner



Frank O'Bannon
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PART 70 OPERATING PERMIT OFFICE OF AIR QUALITY

**Hayes Lemmerz International - Indiana, Inc.
1870 Riverfork Drive
Huntington, Indiana 46750**

(herein known as the Permittee) is hereby authorized to operate subject to the conditions contained herein, the source described in Section A (Source Summary) of this permit.

This permit is issued in accordance with 326 IAC 2 and 40 CFR Part 70 Appendix A and contains the conditions and provisions specified in 326 IAC 2-7 as required by 42 U.S.C. 7401, et. seq. (Clean Air Act as amended by the 1990 Clean Air Act Amendments), 40 CFR Part 70.6, IC 13-15 and IC 13-17.

Operation Permit No.: T069-7421-00031	
Issued by: Original signed by Janet McCabe Janet G. McCabe, Assistant Commissioner Office of Air Quality	Issuance Date: April 16, 2002 Expiration Date: April 16, 2007

First Significant Source Modification No.: 069-16113-00031	Pages Affected: 1, 2, 7 through 31
Issued by Original Signed by Paul Dubenetzky Paul Dubenetzky, Branch Chief Office of Air Quality	Issuance Date: November 19, 2002



SECTION A

SOURCE SUMMARY

This permit is based on information requested by the Indiana Department of Environmental Management (IDEM), Office of Air Quality (OAQ). The information describing the source contained in conditions A.1 through A.3 is descriptive information and does not constitute enforceable conditions. However, the Permittee should be aware that a physical change or a change in the method of operation that may render this descriptive information obsolete or inaccurate may trigger requirements for the Permittee to obtain additional permits or seek modification of this permit pursuant to 326 IAC 2, or change other applicable requirements presented in the permit application.

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary operation that manufactures aluminum wheels for automobiles and light trucks.

Responsible Official:	Rick Guernsey
Source Address:	1870 Riverfork Drive, Huntington, Indiana 46750
Mailing Address:	1870 Riverfork Drive, Huntington, Indiana 46750
General Source Phone Number:	(219) 356-7001
SIC Code:	3714
County Location:	Huntington
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (a) One (1) paint booth, identified as R-30 Color Coat liquid booth, equipped with ten (10) air atomized spray guns, with a maximum capacity to paint 800 aluminum wheels per hour, using dry filters for particulate matter control, exhausting to one (1) stack, identified as S-22. (Constructed in 1993)
- (b) One (1) paint line, identified as the R-30 Powder Coat paint line, with two (2) booths, identified as Powder Coat paint booth North and Powder Coat paint booth South, equipped with a total of four (4) electrostatic air atomized spray guns, with a total maximum throughput capacity of 800 wheels per hour, using dry filters for particulate matter control, exhausting indoors with filtered recycling. (Constructed in 1989)
- (c) One (1) paint line, identified as the R-40 Powder Clear Coat paint line, equipped with one (1) electrostatic air atomized spray gun, with a total maximum throughput capacity of 420 wheels per hour, using dry filters for particulate matter control, exhausting indoors with filtered recycling. (Constructed in 1993)
- (d) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, with a maximum throughput capacity of 6,000 pounds of aluminum per hour, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 °F, exhausting to one (1) stack, identified as S-53. (Constructed in 1996)
- (e) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewall furnace, identified as Sidewall Furnace #5 with

a combined total maximum throughput of 6,000 pounds of clean aluminum/ingots and aluminum scrap per hour. Sidewell Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 processes aluminum/ingots and exhausts to one (1) stack, identified as S-54, with emissions uncontrolled. Sidewell #5 processes aluminum scrap, and is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996)

- (f) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #4, with an associated sidewell furnace, identified as Sidewell Furnace #4 and a total maximum throughput of 6000 pounds of aluminum per hour. Sidewell Furnace #4 is permitted to melt in-house process aluminum scrap (and may only do so as a backup for periods when Melt Furnace #5 is not operational in the event of breakdown or failure). Melt Furnace #4 has a maximum throughput of 4500 pounds of clean aluminum per hour and exhausts to one (1) stack, identified as S-43, with emissions uncontrolled. Sidewell #4 has a maximum throughput of 1500 pounds of in-house aluminum scrap per hour, is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1994)
- (g) One (1) 9.2 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #3, with a maximum throughput capacity of 3000 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-04. (Constructed in 1987)
- (h) One (1) 11 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #2, with a maximum throughput capacity of 3500 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-05. (Constructed in 1990)
- (i) One (1) 11 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #1, with a maximum throughput capacity of 3500 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-06. (Constructed in 1990)
- (j) One (1) carousel holding furnace, identified as Carousel Holding Furnace #1, rated at 3.0 million Btu per hour, with a maximum throughput capacity of 1000 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-09. (Constructed in 1989)
- (k) One (1) carousel holding furnace, identified as Carousel Holding Furnace #2, rated at 3.0 million Btu per hour, with a maximum throughput capacity of 1500 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-08. (Constructed in 1987)
- (l) One (1) carousel holding furnace, identified as Carousel Holding Furnace #3, rated at 3.0 million Btu per hour, with a maximum throughput capacity of 1500 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-03. (Constructed in 1987)
- (m) One (1) carousel holding furnace, identified as Carousel Holding Furnace #4, rated at 3.0 million Btu per hour, with a maximum throughput capacity of 1500 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-10. (Constructed in 1988)
- (n) One (1) carousel holding furnace, identified as Carousel Holding Furnace #5, rated at 3.0 million Btu per hour, with a maximum throughput capacity of 2500 pounds of clean

aluminum/ingots per hour, exhausting to one (1) stack, identified as S-32. (Constructed in 1991)

- (o) One (1) carousel holding furnace, identified as Carousel Holding Furnace #6, rated at 3.0 million Btu per hour, with a maximum throughput capacity of 2500 pounds of clean aluminum/ingots per hour, exhausting to one (1) stack, identified as S-50. (Constructed in 1994)
- (p) One (1) Electric Infrared powder coating oven, which is part of the 3-stage curing oven used for the R-30 Color Coat liquid booth and the R-30 Powder Coat paint line.

A.3 Insignificant Activities [326 IAC 2-7-1(21)] [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)]

This stationary source also includes the following insignificant activities as defined in 326 IAC 2-7-1(21):

- (a) Natural gas-fired combustion sources with heat input equal to or less than ten (10) million Btu per hour.
 - (1) One (1) Dry-Off oven for the R-30 powder and liquid coating lines, with a maximum heat input capacity of 1.43 million Btu per hour, exhausting to one (1) stack, identified as S-11.
 - (2) One (1) 3-stage Curing oven used for the R-30 Color Coat liquid booth and the R-30 Powder Coat paint line, consisting of: one (1) 2-stage Powder Paint cure oven with a maximum heat input capacity of 2.87 million Btu per hour and one (1) Electric Infrared powder coating oven, with a maximum throughput capacity of 800 wheels per hour, exhausting to three (3) stacks, identified as S-12, S-13 and S-14.
 - (3) One (1) Paint Hook Stripping oven, associated with the R-30 Powder Coat paint line, with a maximum heat input capacity of 0.35 million Btu per hour, exhausting to one (1) stack, identified as S-21. [326 IAC 4-2-2]
 - (4) One (1) Heat Treat furnace, identified as HTF-A, with a maximum heat input capacity of 8 million Btu per hour, exhausting to six (6) stacks, identified as S15, S-16, S-17, S-18, S-19 and S-20.
 - (5) One (1) Heat Treat furnace, identified as HTF-B, with a maximum heat input capacity of 6 million Btu per hour, exhausting to six (6) stacks, identified as S-26, S-45, S-46, S-47, S-48 and S-49.
 - (6) One (1) paint line, identified as the R-40 Powder Clear Coat paint line, with:
 - (A) One (1) Pretreat Line Stage #2 burner, with a maximum heat input capacity of 2.07 million Btu per hour, exhausting to one (1) stack, identified as S-34.
 - (B) One (1) Pretreat Line Stage #3 burner, with a maximum heat input capacity of 1.38 million Btu per hour, exhausting to one (1) stack, identified as S-35.
 - (C) One (1) Pretreat Line Stage #8 burner, with a maximum heat input capacity of 0.325 million Btu per hour, exhausting to one (1) stack, identified as S-36.

- (D) One (1) Dryoff Zone #1 oven, with a maximum heat input capacity of 0.838 million Btu per hour, exhausting to one (1) stack, identified as S-37.
- (E) One (1) Dryoff Zone #2 oven, with a maximum heat input capacity of 1.02 million Btu per hour, exhausting to one (1) stack, identified as S-38.
- (F) One (1) R-40 Cure oven, with a maximum heat input capacity of 2.78 million Btu per hour, exhausting to one (1) stack, identified as S-39.
- (7) One (1) Rim Heating oven, with a maximum heat input capacity of 0.4 million Btu per hour, exhausting to one (1) stack, identified as S-56.
- (8) One (1) mold coating/repair process with two (2) mold bake ovens, identified as Mold Bake oven North and Mold Bake oven South, each with a maximum heat input capacity of 1.2 million Btu per hour, resulting in fugitive emissions and exhausting indoors at points S-63 and S-64.
- (9) One (1) natural gas-fired in-line heat treat furnace, identified as In-Line Heat Treat Furnace, with a maximum heat input capacity of 6.0 million Btu per hour, exhausting to one (1) stack designated as S-59. (Constructed in 2001)
- (1) One (1) natural gas-fired age oven, with a maximum heat input capacity of one (1) MMBtu/hr, used to heat clean wheels to 300 degrees for aging purposes. The age oven is operated in a batch cycle of 4000 pounds of wheels per batch.
- (b) Equipment powered by internal combustion engines of capacity equal to or less than 500,000 Btu per hour, except where total capacity of equipment operated by one stationary source exceeds 2,000,000 Btu/hour.
- (c) Combustion source flame safety purging on startup.
- (d) A petroleum fuel, other than gasoline, dispensing facility, having a storage capacity of less than or equal to 10,500 gallons, and dispensing less than or equal to 230,000 gallons per month.
- (e) The following VOC and HAP storage containers:
 - (1) Storage tanks with capacity less than or equal to 1,000 gallons and annual throughputs less than 12,000 gallons.
 - (2) Vessels storing lubricating oils, hydraulic oils, machining oils, and machining fluids.
- (f) Equipment used exclusively for the following: filling drums, pails or other packaging containers with lubricating oil, waxes, and greases.
- (g) Machining where an aqueous cutting coolant continuously floods the machining interface.
- (h) The following equipment related to manufacturing activities not resulting in the emission of HAP's: brazing equipment, cutting torches, soldering equipment, welding equipment.
 - (1) One (1) Robotic auto welder station, used for two piece wheel operation, with a maximum capacity of two (2) pounds of wire per hour and six hundred eleven

(611) pounds per hour of aluminum wheel rims and centers, exhausting to one (1) stack, identified as S-58. (Constructed in 1995; still at the source but currently not in operation) [326 IAC 6-3-2] (Covered under C.1)

- (i) Activities associated with the treatment of wastewater streams with an oil and grease content less than or equal to 1% by volume.
 - (1) One (1) Waste Water Treatment consisting of three (3) tanks, with a maximum heat input capacity of 3 million Btu per hour, resulting in fugitive emissions.
- (j) Forced and induced draft cooling tower system not regulated under a NESHAP.
- (k) Quenching operations used with heat treating processes.
- (l) Replacement or repair of electrostatic precipitators, bags in baghouses and filters in other air filtration equipment.
- (m) Heat exchanger cleaning and repair.
- (n) Process vessel degassing and cleaning to prepare for internal repairs.
- (o) Paved and unpaved roads and parking lots with public access.[326 IAC 6-4] [326 IAC 6-5]
- (p) Purging of gas lines and vessels that is related to routine maintenance and repair of buildings, structures, or vehicles at the source where air emissions from those activities would not be associated with any production process.
- (q) Equipment used to collect any material that might be released during a malfunction, process upset, or spill cleanup, including catch tanks, temporary liquid separators, tanks, and fluid handling equipment.
- (r) Blowdown for any of the following: sight glass, boiler, compressors, pumps, and cooling tower.
- (s) On-site fire and emergency response training approved by the department.
- (t) Grinding and machining operations controlled with fabric filters, scrubbers, mist collectors, wet collectors and electrostatic precipitators with a design grain loading of less than or equal to 0.03 grains per actual cubic foot and a gas flow rate less than or equal to 4,000 actual cubic feet per minute, including the following: deburring, buffing, polishing, abrasive blasting, pneumatic conveying, and woodworking operations.
 - (1) One (1) shotblasting room/booth, with a maximum capacity of 5376 pounds per hour, with one (1) baghouse for particulate matter control, exhausting to one (1) stack, identified as S-33. [326 IAC 6-3-2] (Covered under C.1)
- (u) Filter or coalescer media changeout.
- (v) Mold release agents using low volatile products (vapor pressure less than or equal to 2 kilopascals measured at 38 degrees Celsius.
- (w) A laboratory as defined in 326 IAC 2-7-4(20)(C).
- (x) Other activities or categories not previously identified:

Insignificant Thresholds: Activities with emissions equal to or less than thresholds require listing only.

Lead (Pb) = 0.6 ton/year or 3.29 lbs/day

Sulfur Dioxide = 5 lbs/hour or 25 lbs/day

Nitrogen Oxides (NOX) = 5 lbs/hr or 25 lbs/day

Carbon Monoxide (CO) = 25 lbs/day

Particulate Matter (PM) = 5 lbs/hour or
25 lbs/day

Volatile Organic Compounds (VOC) =
3 lbs/hr or 15 lbs/day

- (1) Three (3) degassing/flux systems, identified as Degassing/Flux System #1, Degassing Flux System #2, and Degassing/Flux System #3, each with maximum throughput capacities of 40 ladles per shift. The larger ladles have a maximum capacity of 3600 pounds per hour and the smaller ladles have maximum capacities of 2000 pounds per hour (with potential PM10 emissions of 0.62 tons per year). DFS#1 exhausting to one (1) stack identified as S-51, DFS#2 exhausting to one (1) stack, identified as S-52, and DFS#3 exhausting to one (1) stack, identified as S-55.
- (2) Propane is used as back-up fuel for all natural gas combustion sources.
- (3) One (1) chip wringer that feeds into the natural gas fired thermal chip dryer at a rate of 3600 pounds of aluminum per hour.
- (4) Twelve (12) electric low pressure aluminum wheel casting units, each with a maximum design throughput of 60 wheels per hour. (Six (6) constructed in 2001) (Six (6) constructed in 2002)

A.4 Part 70 Permit Applicability [326 IAC 2-7-2]

This stationary source is required to have a Part 70 permit by 326 IAC 2-7-2 (Applicability) because:

- (a) It is a major source, as defined in 326 IAC 2-7-1(22);
- (b) It is a source in a source category designated by the United States Environmental Protection Agency (U.S. EPA) under 40 CFR 70.3 (Part 70 - Applicability).

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (d) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, with a maximum throughput capacity of 6,000 pounds of aluminum per hour, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 EF, exhausting to one (1) stack, identified as S-53. (Constructed in 1996)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.2.1 General Reduction Requirements for New Facilities and Prevention of Significant Deterioration [326 IAC 8-1-6] [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP No. 069-4665-00031, issued on October 26, 1995 and 326 IAC 8-1-6, the input coolant on the aluminum chips to the chip dryer shall be limited to 90 pounds per hour assuming that the coolant usage equals 1.5% by weight of the chip processed. This production limitation is equivalent to twelve (12) tons of VOC per twelve (12) consecutive month period. This usage limit is required to limit the potential to emit of VOCs to less than 25 tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 8-1-6 and also 326 IAC 2-2 (Prevention of Significant deterioration) not applicable.

D.2.2 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the natural gas fired thermal chip dryer except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.2.3 Emission Standards and Operating Requirements [40 CFR 63.1505, 40 CFR 63.1506, Subpart RRR]

- (a) Pursuant to 40 CFR 63.1505(c), on and after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator of a thermal chip dryer must not discharge or cause to be discharged to the atmosphere emissions in excess of:
- (1) 0.40 kilograms (kg) of THC, as propane, per megagram (Mg) (0.80 lb of THC, as propane, per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major source ; and
 - (2) 2.50 micrograms (Fg) of D/F TEQ per Mg (3.5×10^{-5} gr per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major or area source.
- (b) Pursuant to 40CFR 63.1506, on and after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator must operate the thermal chip dryer and control equipment according to the requirements in this section.
- (1) Pursuant to 40 CFR 63.1506(c), the owner or operator of the thermal chip dryer/multicyclone must:

- (A) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference in 40 CFR 63.1502 of this subpart)
 - (B) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and
 - (C) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.
- (2) Pursuant to 40 CFR 63.1506(d), the owner or operator of the thermal chip dryer must:
- (A) Except as provided in paragraph (C) of this section, install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and
 - (B) Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.
 - (C) The owner or operator may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:
 - (i) The aluminum production weight, rather than feed/charge weight is measured and recorded for the thermal chip dryer; and
 - (ii) All calculations to demonstrate compliance with the emission limits for thermal chip dryer are based on aluminum production weight rather than feed/charge/weight.
- (3) Pursuant to 40 CFR 63.1506(p), when a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.

D.2.4 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) The PM emissions from stack S-53 for the thermal chip dryer shall not exceed 2.0 lbs/hr. This is based on the emission rate of 0.67 lbs/ton of chips processed and is equivalent to 8.76 tons per year of PM emissions.
- (b) The PM10 emissions from stack S-53 for the thermal chip dryer shall not exceed 2.0 lbs/hr. This is based on the emission rate of 0.67 lbs/ton of chips processed and is equivalent to 8.76 tons per year of PM10 emissions.

Combined with the emissions from stack S-54 for the melt furnace #5, the emissions from both stack S-53 for the thermal chip dryer and stack S-54 for the melt furnace #5 are limited to less than 25 tons per year of PM emissions and less than 15 tons per year of PM10 emissions. Therefore, the requirements of 326 IAC 2-2 are not applicable.

D.2.5 Particulate [326 IAC 6-3-2]

Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the thermal chip dryer shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6,000 pounds per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and
P = process weight rate in tons per hour

D.2.6 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the thermal chip dryer and the multicyclone.

Compliance Determination Requirements

D.2.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63.1511 and 40 CFR 63.1512]

- (a) Within 180 days after the issuance of permit #069-7421-00031, issued April 16, 2002, in order to demonstrate compliance with Condition D.2.3, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 180 days after the issuance of permit #069-16113-00031, in order to demonstrate compliance with Condition D.2.4, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.
- (c) The owner or operator of a thermal chip dryer is subject to the performance test/compliance demonstration general requirements and procedures as listed in 40 CFR 63.1511.
- (d) Pursuant to 40 CFR 63.1512(b), the owner or operator of a thermal chip dryer must conduct a performance test to measure THC and D/F emissions at the outlet of the control device while the unit processes only unpainted aluminum chips.
- (e) Pursuant to 40 CFR 63.1512(k), the owner or operator of a thermal chip dryer subject to an emission limit in a kg/Mg (lb/ton) of feed/charge format must measure (or otherwise determine) and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight. An owner or operator that chooses to demonstrate compliance on the basis of the aluminum

production weight must measure the weight of aluminum produced by the thermal chip dryer instead of the feed/charge weight.

- (f) Pursuant to 40 CFR 63.1512(s), the owner or operator of a thermal chip dryer/multicyclone must submit the information described in 40 CFR 63.1515(b)(2) as part of the notification of compliance status report to document compliance with the operational standard in 40 CFR 63.1506(c).

D.2.8 Equations for Determining Compliance [40 CFR 63.1513]

The owner or operator of the thermal chip dryer must use the equations listed in 40 CFR 63.1513 in order to determine compliance with the applicable emission limits in Condition D.2.3.

D.2.9 Particulate Matter (PM)

Pursuant to CP No. 069-4665-00031, issued on October 26, 1995, the multicyclone for PM control shall be in operation at all times when the thermal chip dryer is in operation.

D.2.10 Volatile Organic Compounds (VOC)

Compliance with the VOC content and usage limitations contained in Condition D.2.1 shall be determined pursuant to 326 IAC 8-1-4(a)(3) and 326 IAC 8-1-2(a) using formulation data supplied by the coating manufacturer.

D.2.11 VOC Emissions

Compliance with Condition D.2.1 shall be demonstrated within 30 days of the end of each month based on the total volatile organic compound usage for the month, twelve (12) month period).

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.2.12 Visible Emissions Notations

- (a) Visible emission notations of the thermal chip dryer/multicyclone stack exhaust shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.13 Parametric Monitoring

The Permittee shall record the total static pressure drop across the multicyclone used in conjunction with the thermal chip dryer, at least once per shift when the thermal chip dryer is in operation. When for any one reading, the pressure drop across the multicyclone is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is

outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.14 Cyclone Inspections

An inspection shall be performed within the last month of each calendar quarter of the multicyclone controlling the thermal chip dryer.

D.2.15 Cyclone Failure Detection

In the event that multicyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.16 Compliance Monitoring Requirements [40 CFR 63.1510, Subpart RRR]

- (a) Pursuant to 40 CFR 63.1510(b), the owner or operator must prepare and implement for the thermal chip dryer, a written operation, maintenance and monitoring (OM&M) plan. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:
- (1) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
 - (2) A monitoring schedule for each affected source and emission unit.
 - (3) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR 63.1505.
 - (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (A) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and
 - (B) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in Subpart A of this part.
 - (5) Procedures for monitoring process and control device parameters, including the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.

- (6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (5)(A) of this section, including:
 - (A) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - (B) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
 - (7) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (b) Pursuant to 40 CFR 63.1510(d), the owner or operator must install, operate, and maintain a capture/collection system for the thermal chip dryer; and inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506 (c) and record the results of each inspection.
- (c) Pursuant to 40 CFR 63.1510(e), the owner or operator of the thermal chip dryer must install, calibrate, operate and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the thermal chip dryer over the same operating cycle or time period used in the performance test. As an alternative to a measurement device, the owner or operator may use a procedure acceptable to IDEM, OAQ to determine the total weight of feed/charge or aluminum production to the affected source or emission unit.
- (1) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The owner or operator may apply to the permitting agency for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standard.
 - (2) The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified in by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.2.17 Record Keeping Requirements [40 CFR 63.10]

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- (a) To document compliance with Condition D.2.1, the Permittee shall maintain records in accordance with (1) through (5) below. Records maintained for (1) through (5) shall be taken monthly and shall be complete and sufficient to establish compliance with the VOC usage limits and/or the VOC emission limits established in Condition D.2.1.
 - (1) The amount and VOC content of the input coolant used. Records shall include purchase orders, invoices, and material safety data sheets (MSDS) necessary to verify the type and amount used;
 - (2) A log of the dates of use;
 - (3) The volume weighted VOC content of the input coolant used for each month.

- (4) The total VOC usage for each month; and
 - (5) The weight of VOCs emitted for each compliance period.
- (b) To document compliance with Condition D.2.12, the Permittee shall maintain records of visible emission notations of the thermal chip dryer/multicyclone stack exhaust once per shift.
- (c) To document compliance with Condition D.2.13, the Permittee shall maintain once per shift records of the inlet and outlet differential static pressure during normal operation.
- (d) To document compliance with Condition D.2.14, the Permittee shall maintain records of the results of the inspections required under Condition D.2.14 and the dates the vents are redirected.
- (e) To document compliance with Condition D.2.3 and D.2.16, as required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart.
 - (1) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
 - (2) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and
 - (3) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
 - (4) In addition to the general records required by 40 CFR 63.10(b), the owner or operator of the thermal chip dryer must maintain records of:
 - (A) feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
 - (B) all charge materials
 - (C) annual inspections of emission capture/collection and closed vent systems
 - (D) any approved alternative monitoring or test procedure.
 - (E) current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (i) startup, shutdown, and malfunction plan;
 - (ii) OM&M plan;
- (f) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.2.18 Reporting Requirements [40 CFR 63.1515] [40 CFR 63.1516]

- (a) A quarterly summary of the information to document compliance with Condition D.2.1 shall be submitted to the address listed in Section C - General Reporting Requirements, of this permit, using the reporting forms located at the end of this permit, or their equivalent, within thirty (30) days after the end of the quarter being reported. The report submitted by the Permittee does require the certification by the "responsible official" as defined by 326 IAC 2-7-1(34).
- (b) Pursuant to 40 CFR 63.1515(a) and as required by 40 CFR 63.9 (b)(5), the owner or operator must submit initial notifications to IDEM, OAQ. If the owner or operator intends to construct a new affected source or reconstruct a source such that it becomes subject to this subpart, notification must be provided of the intended construction or reconstruction. The notification must include all the information required for an application for approval of construction or reconstruction as required by 40 CFR 63.5(d). For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements.
 - (1) The application must be submitted as soon as practicable before the construction or reconstruction is planned to commence (but no sooner than the effective date) if the construction or reconstruction commences after the effective date of this subpart; or
 - (2) The application must be submitted as soon as practicable before startup but no later than 90 days after the effective date of this subpart if the construction or reconstruction had commenced and initial startup had not occurred before the effective date.
 - (3) As required by 40 CFR 63.9 (e) and (f), the owner or operator must provide notification of the anticipated date for conducting the performance tests and visible emission observations. The owner or operator must notify the administrator of the intent to conduct a performance test at least 69 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.
- (c) Pursuant to 40 CFR 63.1515(b), each owner or operator must submit a notification of compliance status report within 60 days after the compliance dates specified in 40 CFR 63.1501. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in the paragraphs (c)(1) through (5) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:
 - (1) All information required in 40 CFR 63.9(h). The owner or operator must provide a complete performance test report for the thermal chip dryer/multicyclone. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).

- (2) The compliant operating parameter value or range established with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
 - (3) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).
 - (4) Approved OM&M plan
 - (5) Startup, shutdown, and malfunction plan, with revisions.
- (d) Pursuant to 40 CFR 63.1516(a), the owner or operator must develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:
- (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (e) Pursuant to 40 CFR 63.1516(b) and as required by 40 CFR 63.10 (e), the owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.
- (1) A report must be submitted if any of these conditions occur during a 6-month reporting period:
 - (A) An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).
 - (B) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
 - (C) The thermal chip dryer/multicyclone was not operated according to the requirements of this subpart.
 - (2) Each report must include this certification: "Only unpainted aluminum chips were used as feedstock in any thermal chip dryer during this reporting period."

- (3) The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.
- (f) Pursuant to 40 CFR 63.1516(c) and as required by 40 CFR part 70 or 71, for the purpose of annual certifications of compliance, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:
 - (1) Any period of excess emissions, as defined in paragraph (e)(1) of this section, that occurred during the year were reported as required by this subpart; and
 - (2) All monitoring, recordkeeping, and reporting requirements were met during the year.

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (e) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewell furnace, identified as Sidewell Furnace #5 and a total maximum throughput of 6,000 pounds of clean aluminum/ingots and aluminum scrap per hour. Sidewell Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 processes clean aluminum/ingots and exhausts to one (1) stack, identified as S-54, with emissions uncontrolled. Sidewell #5 processes aluminum scrap, and is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996)
- (f) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #4, with an associated sidewell furnace, identified as Sidewell Furnace #4 and a total maximum throughput of 6000 pounds of aluminum per hour. Sidewell Furnace #4 is permitted to melt in-house process aluminum scrap (and may only do so as a backup for periods when Melt Furnace #5 is not operational in the event of breakdown or failure). Melt Furnace #4 has a maximum throughput of 4500 pounds of clean aluminum per hour and exhausts to one (1) stack, identified as S-43, with emissions uncontrolled. Sidewell #4 has a maximum throughput of 1500 pounds of in-house aluminum scrap per hour, is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1994)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

Emission Limitations and Standards [326 IAC 2-7-5(1)]

D.3.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) The PM emissions from stack S-54 for the melt furnace #5 shall not exceed 1.0 lbs/hr. This is based on the emission rate of 0.33 lbs/ton of aluminum processed and is equivalent to 4.38 tons per year of PM emissions.
- (b) The PM10 emissions from stack S-54 for the melt furnace #5 shall not exceed 1.0 lbs/hr. This is based on the emission rate of 0.33 lbs/ton of aluminum processed and is equivalent to 4.38 tons per year of PM10 emissions.

Combined with the emissions from stack S-53 for the thermal chip dryer, the emissions from both stack S-53 for the thermal chip dryer and stack S-54 for the melt furnace #5 are limited to less than 25 tons per year of PM emissions and less than 15 tons per year of PM10 emissions. Therefore, the requirements of 326 IAC 2-2 are not applicable.

D.3.2 Particulate [326 IAC 6-3-2]

- (a) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from Melt Furnace #5 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6,000 pounds per hour. Pursuant to 326 IAC 6-3-2, the allowable particulate emissions from Melt Furnace #4 shall not exceed 6.52 pounds per hour when operating at a process weight rate of 2.00 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and

P = process weight rate in tons per hour

- (b) Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from Sidewell Furnace #5 shall not exceed 8.56 pounds per hour when operating at a process weight rate of 6,000 pounds per hour. Pursuant to 326 IAC 6-3, the allowable particulate emissions from Sidewell Furnace #4 shall not exceed 3.38 pounds per hour when operating at a process weight rate of 0.75 tons per hour. The pound per hour limitation was calculated with the following equation.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

D.3.3 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.3.4 Emission Standards and Operating Requirements [40 CFR 63.1505, 40 CFR 63.1506, Subpart RRR]

(a) Pursuant to 40 CFR 63.1505(i),

- (1) The owner or operator of Melt Furnace #4 and Melt Furnace #5 must use the following limits to determine the emission standards for a secondary aluminum processing unit (SAPU):
- (A) 0.40 kg of PM per Mg (0.80 lb of PM per ton) of feed/charge
 - (B) 15 Fg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge. This limit does not apply if the furnace processes only clean charge; and
 - (C) 0.20 kg of HCl per Mg (0.40 lb of HCl per ton) of feed/charge
 - (D) The owner or operator may determine the emission standards for Melt Furnace #4 and Melt Furnace #5 by applying the limits on the basis of the aluminum production weight in each furnace, rather than on the basis of feed/charge.
- (2) The owner or operator of Sidewell Furnace #4 and Sidewell Furnace #5 (that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth) must comply with the emission limits below on the basis of the combined emissions from the sidewell and the hearth:
- (A) 0.02 kg of HCl per Mg (0.04 lb of HCl per ton) of feed/charge
 - (B) 0.005 kg of PM per Mg (0.01 lb of PM per ton) of feed/charge
 - (C) 15 Fg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge. This limit does not apply if the furnace processes only clean charge.

- (D) The emission limits listed above do not apply to the sidewell furnaces if they use no reactive flux materials
 - (E) The owner or operator may determine the emission standards for Sidewell Furnace #4 and Sidewell Furnace #5 by applying the limits on the basis of the aluminum production weight in each furnace, rather than on the basis of feed/charge.
- (b) On and after the date of approval of the operation, maintenance and monitoring (OM&M) plan, the owner or operator must comply with the emission limits calculated using the equations for PM, HCl, and D/F listed in 40 CFR 63.1505(k) for Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5.
- (c) Pursuant to 40 CFR 63.1506(a), on and after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator must operate Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 and control equipment according to the requirements in this section. The completion of the initial performance tests for Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, shall be considered to be the date of approval of the OM&M plan by the permitting authority.
- (d) The owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must:
- (1) Pursuant to 40 CFR 63.1506(b), provide and maintain easily visible labels posted at each furnace that identifies the applicable emission limits and means of compliance, including:
 - (A) The type of affected source or emission unit (e.g. group 1 furnace, sidewell furnace)
 - (B) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and additional practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.
 - (2) Pursuant to 40 CFR 63.1506(d), except as provided in Condition D.3.3 (d)(2) (C) of this section,
 - (A) Install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and
 - (B) Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.
 - (C) The owner or operator may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:
 - (i) The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units; and

- (ii) All calculations to demonstrate compliance with the emission limits are based on aluminum production weight rather than feed/charge/weight.
- (3) Pursuant to 40 CFR 63.1506(p), When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.
- (e) Pursuant to 40 CFR 63.1506(n), the owner or operator of Melt Furnace #4 and Melt Furnace #5 must:
 - (1) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
 - (2) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan.
 - (3) Operate each furnace using only clean charge as the feedstock.
- (f) Pursuant to 40 CFR 63.1506(c), the owner or operator of Sidewell Furnace #4 and Sidewell Furnace #5 must:
 - (1) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference in 40 CFR 63.1502 of this subpart)
 - (2) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and
 - (3) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.
- (g) Pursuant to 40 CFR 63.1506(m)(6), the owner or operator of Sidewell Furnace #4 and Sidewell Furnace #5 must:
 - (1) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
 - (2) Operate each sidewell furnace such that:

- (A) The level of molten metal remains above the top of the passage between the sidewell and hearth during reactive flux injection, unless the hearth also is equipped with an add-on control device.
- (B) Reactive flux is added only in the sidewell unless the hearth is also equipped with an add-on control device.

D.3.5 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Sidewell Furnace #4 and Sidewell Furnace #5 and the multicyclone.

D.3.6 Alternative Operating Scenario

Sidewell Furnace #4 is allowed to melt in-house process aluminum scrap as a backup for periods when Melt Furnace #5/Sidewell Furnace #5 is not operational due to breakdown or failure.

Compliance Determination Requirements

D.3.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63.1511 and 40 CFR 63.1512]

- (a) Within 180 days after the issuance of permit #069-7421-00031, issued April 16, 2002, in order to demonstrate compliance with Condition D.3.2, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.
- (b) Within 180 days after the issuance of permit #069-16113-00031, in order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.
- (c) The owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 is subject to the performance test/compliance demonstration general requirements and procedures as listed in 40 CFR 63.1511.
- (d) Pursuant to 40 CFR 63.1512(d)(4), the owner or operator of Sidewell Furnace #4 and Sidewell Furnace #5 that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, must conduct performance tests to measure emissions of PM and D/F at the outlet of the control device and emissions of HCl at the outlet (for the emission limit) or the inlet and the outlet (for the percent reduction standard).
- (e) Pursuant to 40 CFR 63.1512(e) and the site specific monitoring plan required by 40 CFR 63.1510(o), the owner or operator of Melt Furnace #4 and Melt Furnace #5 must include data and information demonstrating compliance with the applicable emission limits below:
 - (1) If Melt Furnace #4 and/or Melt Furnace #5 processes material other than clean charge, the owner or operator must conduct emission tests to measure emissions of PM, HCl, and D/F at the furnace exhaust outlet.

- (2) If Melt Furnace #4 and/or Melt Furnace #5 processes only clean charge, the owner or operator must conduct emission tests to simultaneously measure emissions of PM and HCl at the furnace exhaust outlet. A D/F test is not required. Each test must be conducted while the melt furnaces process only clean charge.
 - (3) The owner or operator may choose to determine the rate of reactive flux added to the melt furnaces and assume, for the purposes of demonstrating compliance with the emission limits, that all reactive flux added to the melt furnaces is emitted. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl.
- (f) Pursuant to 40 CFR 63.1512(j), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must conduct performance tests as described in this section. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM and HCl and Fg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR 63.1510(t). A performance test is required for each group 1 furnace processing only clean charge to measure emissions of PM and/or each group 1 furnace that processes scrap other than clean charge to measure emissions of PM and D/F and either:
 - (1) Emissions of HCl (for the emission limit) or
 - (2) The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard)
- (g) Pursuant to 40 CFR 63.1512(k), during the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, subject to an emission limit in a kg/Mg (lb/ton) of feed/charge format must measure (or otherwise determine) and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight. An owner or operator that chooses to demonstrate compliance on the basis of the aluminum production weight must measure the weight of aluminum produced by the thermal chip dryer instead of the feed/charge weight.
- (h) Pursuant to 40 CFR 63.1512(o), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, must use these procedures to establish an operating parameter value or range for the total reactive chlorine flux injection rate.
 - (1) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;
 - (2) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;
 - (3) Determine the total reactive chlorine flux injection rate by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the following equation:

$$W_t = F_1W_1 + F_2W_2$$

Where,

W_t = total chlorine usage, by weight

F_1 = fraction of gaseous or liquid flux that is chlorine

W_1 = weight of reactive flux gas injected;

F_2 = fraction of solid reactive chloride flux that is chlorine
(e.g., $F = 0.75$ for magnesium chloride); and

W_2 = weight of solid reactive flux;

- (4) Divide the weight of total chlorine usage (W_t) for the 3 test runs; and
 - (5) If a solid reactive flux other than magnesium chloride is used, the owner or operator must derive the appropriate proportion factor subject to approval by IDEM, OAQ.
- (i) Pursuant to 40 CFR 63.1512(s), the owner or operator of Sidewell Furnace #4 and/or Sidewell Furnace #5 and the multicyclone must submit the information described in 40 CFR 63.1515(b)(2) as part of the notification of compliance status report to document compliance with the operational standard in 40 CFR 63.1506(c).

D.3.8 Particulate Matter (PM)

Pursuant to CP No. 069-4665-00031, issued on October 26, 1995, the multicyclone for PM control shall be in operation at all times when Sidewell Furnace #4 and Sidewell Furnace #5 are in operation.

D.3.9 Equations for Determining Compliance [40 CFR 63.1513]

- (a) The owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must use the equations listed in 40 CFR 63.1513 in order to determine compliance with the applicable emission limits in Condition D.3.4.
- (b) The owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must use the equation listed in 40 CFR 63.1510(t) in order to calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on a daily basis as required in Condition D.3.4(b) pursuant to 40 CFR 63.1505(k).

Compliance Monitoring Requirements [326 IAC 2-7-6(1)] [326 IAC 2-7-5(1)]

D.3.10 Visible Emissions Notations

- (a) Visible emission notations of the sidewell furnaces/multicyclone stack exhaust shall be performed once per shift during normal daylight operations. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.

- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.3.11 Parametric Monitoring

The Permittee shall record the total static pressure drop across the multicyclone used in conjunction with the sidewell furnaces, at least once per shift when Sidewell Furnace #4 and/or Sidewell Furnace #5 is in operation. When for any one reading, the pressure drop across the multicyclone is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.12 Cyclone Inspections

An inspection shall be performed within the last month of each calendar quarter of the multicyclone controlling Sidewell Furnace #4 and/or Sidewell Furnace #5.

D.3.13 Cyclone Failure Detection

In the event that multicyclone failure has been observed:

Failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.3.14 Compliance Monitoring Requirements [40 CFR 63.1510, Subpart RRR]

- (a) Pursuant to 40 CFR 63.1510(b), the owner or operator must prepare and implement for Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, a written operation, maintenance and monitoring (OM&M) plan. Any subsequent changes to the plan must be submitted to the applicable permitting authority for review and approval. Pending approval by the applicable permitting authority of an initial or amended plan, the owner or operator must comply with the provisions of the submitted plan. Each plan must contain the following information:
 - (1) Process and control device parameters to be monitored to determine compliance, along with established operating levels or ranges, as applicable, for each process and control device.
 - (2) A monitoring schedule for each affected source and emission unit.
 - (3) Procedures for the proper operation and maintenance of each process unit and add-on control device used to meet the applicable emission limits or standards in 40 CFR 63.1505.

- (4) Procedures for the proper operation and maintenance of monitoring devices or systems used to determine compliance, including:
 - (A) Calibration and certification of accuracy of each monitoring device, at least once every six (6) months, according to the manufacturer's instructions; and
 - (B) Procedures for the quality control and quality assurance of continuous emission or opacity monitoring systems as required by the general provisions in Subpart A of this part.
- (5) Procedures for monitoring process and control device parameters, including the procedure to be used for determining charge/feed (or throughput) weight if a measurement device is not used.
- (6) Corrective actions to be taken when process or operating parameters or add-on control device parameters deviate from the value or range established in paragraph (5)(A) of this section, including:
 - (A) Procedures to determine and record the cause of a deviation or excursion, and the time the deviation or excursion began and ended; and
 - (B) Procedures for recording the corrective action taken, the time corrective action was initiated, and the time/date corrective action was completed.
- (7) A maintenance schedule for each process and control device that is consistent with the manufacturer's instructions and recommendations for routine and long-term maintenance.
- (8) Pursuant to 40 CFR 63.1510(s), the owner or operator must include within the OM&M plan prepared in accordance with 40 CFR 63.1510(b), the following information:
 - (A) The identification of each emission unit in the secondary aluminum processing unit;
 - (B) The specific control technology or pollution prevention measure to be used for each emission unit in the secondary aluminum processing unit and the date of its installation or application;
 - (C) The emission limit calculated for each secondary aluminum processing unit and performance test results with supporting calculations demonstrating initial compliance with each applicable emission limit;
 - (D) Information and data demonstrating compliance for each emission unit with all applicable design, equipment, work practice or operational standards of this subpart; and
 - (E) The monitoring requirements applicable to each emission unit in a secondary aluminum processing unit and the monitoring procedures for daily calculation of the 3-day, 24-hour rolling average using the procedure in 40 CFR 63.1510(t). As an alternative to the procedures of 40 CFR 63.1510(t), an owner or operator may demonstrate, through performance tests, that each individual emission unit within the

secondary aluminum production unit is in compliance with the applicable emission limits for the emission unit.

- (9) Pursuant to 40 CFR 63.1510(s), the SAPU compliance procedures within the OM&M plan may not contain any of the following provisions:
 - (A) Any averaging among emissions of differing pollutants;
 - (B) The inclusion of any affected sources other than emission units in a secondary aluminum processing unit;
 - (C) The inclusion of any emission unit while it is shutdown; or
 - (D) The inclusion of any periods of startup, shutdown, or malfunction in emission calculations.
- (10) To revise SAPU compliance provisions within the OM&M plan prior to the end of the permit term, the owner or operator must submit a request to IDEM, OAQ containing the information required by paragraph (8) of this section and obtain approval from IDEM, OAQ prior to implementing any revisions.
- (b) Pursuant to 40 CFR 63.1510(c), the owner or operator must inspect the labels for Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 at least once per calendar month to confirm that posted labels as required by the operational standard in Condition D.3.3(b)(2)(A) are intact and legible.
- (c) Pursuant to 40 CFR 63.1510(d), the owner or operator must install, operate, and maintain a capture/collection system for Sidewell Furnace #4 and Sidewell Furnace #5; and inspect each capture/collection and closed vent system at least once each calendar year to ensure that each system is operating in accordance with the operating requirements in 40 CFR 63.1506(c) and record the results of each inspection.
- (d) Pursuant to 40 CFR 63.1510(e), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must install, calibrate, operate and maintain a device to measure and record the total weight of feed/charge to, or the aluminum production from, the sidewell furnaces over the same operating cycle or time period used in the performance test. Feed/charge or aluminum production within SAPUs must be measured and recorded on an emission unit-by-emission unit basis. As an alternative to a measurement device, the owner or operator may use a procedure acceptable to the applicable permitting authority to determine the total weight of feed/charge or aluminum production to the affected source or emission unit.
 - (1) The accuracy of the weight measurement device or procedure must be ± 1 percent of the weight being measured. The owner or operator may apply to the permitting agency for approval to use a device of alternative accuracy if the required accuracy cannot be achieved as a result of equipment layout or charging practices. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standard.
 - (2) The owner or operator must verify the calibration of the weight measurement device in accordance with the schedule specified in by the manufacturer, or if no calibration schedule is specified, at least once every six (6) months.
- (e) Pursuant to 40 CFR 63.1510(j), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must:

- (1) Install, calibrate, operate, and maintain a device to continuously measure and record the weight of gaseous or liquid reactive flux injected to each affected source or emission unit.
 - (A) The monitoring system must record the weight for each 15-minute block period, during which reactive fluxing occurs, over the same operating cycle or time period used in the performance test.
 - (B) The accuracy of the weight measurement device must be ± 1 percent of the weight of the reactive component of the flux being measured. The owner or operator may apply to the permitting authority for permission to use a weight measurement device of alternative accuracy in cases where the reactive flux flow rates are so low as to make the use of a weight measurement device of ± 1 percent impracticable. A device of alternative accuracy will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards.
 - (C) Verify the calibration of the weight measurement device in accordance with the schedule specified by the manufacturer, or if no calibration schedule is specified, at least once every 6 months.
 - (2) Calculate and record the gaseous or liquid reactive flux injection rate (kg/Mg or lb/ton) for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
 - (3) Record, for each 15-minute block period during each operating cycle or time period used in the performance test during which reactive fluxing occurs, the time, weight, and type of flux for each addition of:
 - (A) Gaseous or liquid reactive flux other than chlorine; and
 - (B) Solid reactive flux.
 - (4) Calculate and record the total reactive flux injection rate for each operating cycle or time period used in the performance test using the procedure in 40 CFR 63.1512(o).
 - (5) The owner or operator may apply to IDEM, OAQ for approval of an alternative method for monitoring and recording the total reactive flux addition rate based on monitoring the weight or quantity of reactive flux per ton of feed/charge for each operating cycle or time period used in the performance test. An alternative monitoring method will not be approved unless the owner or operator provides assurance through data and information that the affected source will meet the relevant emission standards on a continuous basis.
- (f) Pursuant to 40 CFR 63.1510(n), the owner or operator of Sidewell Furnace #4 and Sidewell Furnace #5 must:
- (1) Record in an operating log for each charge of a sidewell furnace that the level of molten metal was above the top of the passage between the sidewell and hearth during reactive flux injection, unless the furnace hearth was also equipped with an add-on control device.

- (2) Submit a certification of compliance with the operational standards in Condition D.3.3(g) for each six (6) month reporting period. Each certification must contain the information in 40 CFR 63.1516 (b)(2)(iii).
- (g) Pursuant to 40 CFR 63.1510(o), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must develop, in consultation with IDEM, OAQ, a written site-specific monitoring plan. The site-specific monitoring plan must be part of the OM&M plan that addresses monitoring and compliance requirements for PM, HCl, and D/F emissions.
 - (1) Submit the site specific monitoring plan to IDEM, OAQ for review at least six (6) months prior to the compliance date.
 - (2) IDEM, OAQ will review and approve or disapprove a proposed plan, based on whether the plan contains sufficient provisions to ensure continuing compliance with applicable emission limits and demonstrates, based on documented test results, the relationship between emissions of PM, HCl, and D/F and the proposed monitoring parameters for each pollutant. Test data must establish the highest level of PM, HCl, and D/F that will be emitted from the furnace. Subject to IDEM, OAQ approval of the OM&M plan, this may be determined by conducting performance tests and monitoring operating parameters while charging the furnaces with feed/charge materials containing the highest level of anticipated levels of oils and coatings and fluxing at the highest anticipated rate.
 - (3) Each site-specific monitoring plan must:
 - (A) Document each work practice, equipment/design practice, pollution prevention practice, or other measures used to meet the applicable emission standards.
 - (B) Include provisions for unit labeling as required in paragraph (b) of this condition, feed/charge weight measurement (or production weight measurement) as required in paragraph (d) of this condition and flux weight measurement as required in paragraph (e) of this condition.
 - (C) Include these requirements:
 - (i) The owner or operator must record the type of feed/charge (e.g., ingot, thermally dried chips, dried scrap, etc.) For each operating cycle or time period used in the performance test; and
 - (ii) The owner or operator must submit a certification of compliance with the applicable operational standard for clean charge materials in 40 CFR 63.1506(n)(3) for each six (6) month reporting period. Each certification must contain the information in 40 CFR 63.1516(b)(2)(iv).
 - (iii) A scrap inspection program or a calculation method for monitoring the scrap contaminant level of furnace feed/charge materials. The owner or operator of a group 1 furnace dedicated to processing a distinct type of furnace feed/charge composed of scrap with a uniform composition (such as rejected product from a manufacturing process for which the coating-to-scrap ratio can be documented) may include a program in the site specific monitoring plan for determining, monitoring, and

certifying the scrap contaminant level using a calculation method rather than a scrap inspection program.

- (4) Pursuant to 40 CFR 63.1510(p), if a scrap inspection program is used, the program must include the following:
 - (A) A proven method for collecting representative samples and measuring the oil and coatings content of scrap samples;
 - (B) A scrap inspector training program;
 - (C) An established correlation between visual inspection and physical measurement of oil and coatings content of scrap samples;
 - (D) Periodic physical measurements of oil and coatings content of randomly-selected scrap samples and comparison with visual inspection results;
 - (E) A system for assuring that only acceptable scrap is charged to an affected furnace; and
 - (F) Recordkeeping requirements to document conformance with plan requirements.
- (5) Pursuant to 40 CFR 63.1510(p), if a scrap contaminant monitoring program using a calculation method is used, the program must include the following:
 - (A) Procedures for the characterization and documentation of the contaminant level of the scrap prior to the performance test.
 - (B) Limitations on the furnace feed/charge to scrap of the same composition as that used in the performance test. If the performance test was conducted with a mixture of scrap and clean charge, limitations on the proportion of scrap in the furnace feed/charge to no greater than the proportion used during the performance test.
 - (C) Operating, monitoring, recordkeeping, and reporting requirements to ensure that no scrap with a contaminant level higher than that used in the performance test is charged to the furnace.
- (h) Pursuant to 40 CFR 63.1510(t) and (u), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on a daily basis using the procedures and equation listed in 40 CFR 63.1510(t) (1)-(5). As an alternative, the owner or operator may demonstrate, through performance tests, that each individual emission unit within the SAPU is in compliance with the applicable emission limits for the emission unit.

Record Keeping and Reporting Requirement [326 IAC 2-7-5(3)] [326 IAC 2-7-19]

D.3.15 Record Keeping Requirements [40 CFR 63.10] [40 CFR 63.1517]

- (a) To document compliance with Condition D.3.10, the Permittee shall maintain records of visible emission notations of the sidewell furnaces/multicyclone stack exhaust once per shift.

- (b) To document compliance with Condition D.3.11, the Permittee shall maintain once per shift records of the inlet and outlet differential static pressure during normal operation.
- (c) To document compliance with Condition D.3.12, the Permittee shall maintain records of the results of the inspections required under Condition D.3.12 and the dates the vents are redirected.
- (d) Pursuant to 40 CFR 63.1517 and to document compliance with Condition D.3.4 and D.3.14, as required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart.
 - (1) The owner or operator must retain each record for at least 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The most recent 2 years of records must be retained at the facility. The remaining 3 years of records may be retained off site.
 - (2) The owner or operator may retain records on microfilm, computer disks, magnetic tape, or microfiche; and
 - (3) The owner or operator may report required information on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.
- (e) In addition to the general records required by 40 CFR 63.10(b), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must maintain records of:
 - (1) 15-minute block average weights of gaseous or liquid reactive flux injection, total reactive flux injection rate and calculations (including records of the identity, composition, and weight of each addition of gaseous, liquid or solid reactive flux), including records of any period the rate exceeds the compliant operating parameter value and corrective actions taken.
 - (2) feed/charge (or throughput) weights for each operating cycle or time period used in the performance test.
 - (3) All charge materials
 - (4) Operating logs documenting conformance with operating standards for maintaining the level of molten metal above the top of the passage between the sidewell and hearth during reactive flux injection and for adding reactive flux only to the sidewell or a furnace hearth equipped with a control device for PM, HCl, and D/F emissions.
 - (5) Annual inspections of emission capture/collection and closed vent systems
 - (6) Any approved alternative monitoring or test procedure.
 - (7) Current copy of all required plans, including any revisions, with records documenting conformance with the applicable plan, including:
 - (A) Startup, shutdown, and malfunction plan;
 - (B) OM&M plan;

(C) Site-specific secondary aluminum processing unit emission plan.

- (8) Total charge weight, or if the owner or operator chooses to comply on the basis of aluminum production, total aluminum produced for each 24-hour period and calculations of 3-day, 24-hour rolling average emissions.
- (f) In addition to the general records required by 40 CFR 63.10(b), the owner or operator of Melt Furnace #4 and Melt Furnace #5 must maintain records of approved site-specific monitoring plan with records documenting conformance with the plan.
- (g) Pursuant to 40 CFR 63.1516(a), the owner or operator must develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:
- (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
- (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (h) The source must contain information specified in 40 CFR 63.10(c) in order to demonstrate conformance with the sources startup, shutdown and malfunction plan.
- (i) All records shall be maintained in accordance with Section C - General Record Keeping Requirements, of this permit.

D.3.16 Reporting Requirements [40 CFR 63.1515] [40 CFR 63.1516]

- (a) Pursuant to 40 CFR 63.1515(a) and as required by 40 CFR 63.9(b)(5), the owner or operator must submit initial notifications to IDEM, OAQ. If the owner or operator intends to construct a new affected source or reconstruct a source such that it becomes subject to this subpart, notification must be provided of the intended construction or reconstruction. The notification must include all the information required for an application for approval of construction or reconstruction as required by 40 CFR 63.5(d). For major sources, the application for approval of construction or reconstruction may be used to fulfill these requirements.
- (1) The application must be submitted as soon as practicable before the construction or reconstruction is planned to commence (but no sooner than the effective date) if the construction or reconstruction commences after the effective date of this subpart; or
- (2) The application must be submitted as soon as practicable before startup but no later than 90 days after the effective date of this subpart if the construction or reconstruction had commenced and initial startup had not occurred before the effective date.
- (3) As required by 40 CFR 63.9(e) and (f), the owner or operator must provide notification of the anticipated date for conducting the performance tests and visible emission observations. The owner or operator must notify the

administrator of the intent to conduct a performance test at least 60 days before the performance test is scheduled; notification of opacity or visible emission observations for a performance test must be provided at least 30 days before the observations are scheduled to take place.

- (b) Pursuant to 40 CFR 63.1515(b), each owner or operator must submit a notification of compliance status report within 60 days after the compliance dates specified in 40 CFR 63.1501. The notification must be signed by the responsible official who must certify its accuracy. A complete notification of compliance status report must include the information specified in the paragraphs (b)(1) through (7) of this section. The required information may be submitted in an operating permit application, in an amendment to an operating permit application, in a separate submittal, or in any combination. In a State with an approved operating permit program where delegation of authority under section 112(l) of the CAA has not been requested or approved, the owner or operator must provide duplicate notification to the applicable Regional Administrator. If an owner or operator submits the information specified in this section at different times or in different submittals, later submittals may refer to earlier submittals instead of duplicating and resubmitting the information previously submitted. A complete notification of compliance status report must include:
- (1) All information required in 40 CFR 63.9(h). The owner or operator must provide a complete performance test report for Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5. A complete performance test report includes all data, associated measurements, and calculations (including visible emission and opacity tests).
 - (2) The approved site-specific test plan and performance evaluation test results for each continuous monitoring system (including a continuous emission or opacity monitoring system).
 - (3) Unit labeling as described in 40 CFR 63.1506(b), including process type or furnace classification and operating requirements.
 - (4) The compliant operating parameter value or range established with supporting documentation and a description of the procedure used to establish the value (e.g., lime injection rate, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature), including the operating cycle or time period used in the performance test.
 - (5) Design information and analysis, with supporting documentation, demonstrating conformance with the requirements for capture/collection systems in 40 CFR 63.1506(c).
 - (6) Approved OM&M plan
 - (7) Startup, shutdown, and malfunction plan, with revisions.
- (c) Pursuant to 40 CFR 63.1516(a), the owner or operator must develop and implement a written plan as described in 40 CFR 63.6(e)(3) that contains specific procedures to be followed for operating and maintaining the source during periods of startup, shutdown, and malfunction, and a program of corrective action for malfunctioning process and air pollution control equipment used to comply with the standard. The owner or operator shall also keep records of each event as required by 40 CFR 63.10(b) and record and report if an action taken during a startup, shutdown, or malfunction is not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3). In addition to the information required in 40 CFR 63.6(e)(3), the plan must include:

- (1) Procedures to determine and record the cause of the malfunction and the time the malfunction began and ended; and
 - (2) Corrective actions to be taken in the event of a malfunction of a process or control device, including procedures for recording the actions taken to correct the malfunction or minimize emissions.
- (d) Pursuant to 40 CFR 63.1516(b) and as required by 40 CFR 63.10(e), the owner or operator must submit semiannual reports within 60 days after the end of each 6-month period. Each report must contain the information specified in 40 CFR 63.10(c). When no deviations of parameters have occurred, the owner or operator must submit a report stating that no excess emissions occurred during the reporting period.
 - (1) A report must be submitted if any of these conditions occur during a 6-month reporting period:
 - (A) An excursion of a compliant process or operating parameter value or range (e.g., lime injection rate or screw feeder setting, total reactive chlorine flux injection rate, afterburner operating temperature, fabric filter inlet temperature, definition of acceptable scrap, or other approved operating parameter).
 - (B) An action taken during a startup, shutdown, or malfunction was not consistent with the procedures in the plan as described in 40 CFR 63.6(e)(3).
 - (C) If Sidewell Furnace #4, Sidewell Furnace #5, Melt Furnace #4 and Melt Furnace #5 were not operated according to the requirements of this subpart.
 - (2) Each report must include each of these certifications, as applicable:
 - (A) For Sidewell Furnace #4 and Sidewell Furnace #5: "Each furnace was operated such that the level of molten metal remained above the top of the passage between the sidewell and hearth during reactive fluxing, and reactive flux, except for cover flux, was added only to the sidewell or to a furnace hearth equipped with an add-on air pollution control device for PM, HCl, and D/F emissions during this reporting period."
 - (B) For Melt Furnace #4 and Melt Furnace #5: "Each group 1 furnace without add-on air pollution control devices subject to emission limits in 40 CFR 63.1505 (i)(2) processed only clean charge during this reporting period."
 - (3) The owner or operator must submit the results of any performance test conducted during the reporting period, including one complete report documenting test methods and procedures, process operation, and monitoring parameter ranges or values for each test method used for a particular type of emission point tested.
- (e) Pursuant to 40 CFR 63.1516(c) and as required by 40 CFR part 70 or 71, for the purpose of annual certifications of compliance, the owner or operator must certify continuing compliance based upon, but not limited to, the following conditions:
 - (1) Any period of excess emissions, as defined in paragraph (e)(1) of this section, that occurred during the year were reported as required by this subpart; and

- (2) All monitoring, recordkeeping, and reporting requirements were met during the year.

Indiana Department of Environmental Management Office of Air Quality

Addendum to the Technical Support Document for a Significant Source Modification and a Significant Permit Modification

Source Background and Description

Source Name:	Hayes-Lemmerz International, Inc.
Source Location:	1870 Riverfork Drive, Huntington, Indiana 46750
County:	Huntington
SIC Code:	3714
Operation Permit No.:	T069-7421-00031
Operation Permit Issuance Date:	April 16, 2002
Significant Source Modification No.:	069-16113-00031
Significant Permit Modification No.:	069-15926-00031
Permit Reviewer:	ERG/YC

On October 3, 2002, the Office of Air Quality (OAQ) had a notice published in the Herald Press, Huntington, Indiana, stating that Hayes-Lemmerz International, Inc. had applied for a Part 70 Significant Source Modification and a Part 70 Significant Permit Modification to increase the aluminum scrap throughput rates in the dryer and melt furnace #5. The notice also stated that OAQ proposed to issue a permit for this operation and provided information on how the public could review the proposed permit and other documentation. Finally, the notice informed interested parties that there was a period of thirty (30) days to provide comments on whether or not this permit should be issued as proposed.

Upon further review, the OAQ has decided to make the following revisions to the permit (bolded language has been added, the language with a line through it has been deleted). The Table Of Contents has been modified, if applicable, to reflect these changes.

1. This source only uses clean aluminum ingots or in house aluminum scrap to make aluminum wheels. The source does not purchase aluminum scrap from other sources and is not primarily engaged in the metal recovery process. Therefore, this source is not considered a "secondary metal production plant" or 1 of 28 source categories, as defined in 326 IAC 2-2-1(y) for PSD review purposes, and the fugitive PM emissions are not counted toward determination of PSD applicability.

The TSD states that the source is in 1 of 28 source categories, but this is not correct. No changes have been made to the TSD because IDEM, OAQ prefers that the TSD reflect the permit as it was on public notice.

However, the source had actual PM/PM10 emissions greater than 250 tons/yr in 1996. Therefore, this source is a PSD major source. IDEM, OAQ has made the following corrections to Condition A.1 to reflect the current source status:

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary operation that manufactures aluminum wheels for automobiles and light trucks.

Responsible Official:	Rick Guernsey
Source Address:	1870 Riverfork Drive, Huntington, Indiana 46750
Mailing Address:	1870 Riverfork Drive, Huntington, Indiana 46750
General Source Phone Number:	(219) 356-7001
SIC Code:	3714
County Location:	Huntington
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program Major Source, under PSD; Major Source, Section 112 of the Clean Air Act Not 1 of 28 Source Categories

2. The following correction was made to Condition A.2 (d) and (e) to indicate that the dryer and furnace are not being modified, but their capacities are being clarified from the original permit:

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)]
[326 IAC 2-7-5(15)]

This stationary source consists of the following emission units and pollution control devices:

- (d) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, with a maximum throughput capacity of 6,000 pounds of aluminum per hour, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 EF, exhausting to one (1) stack, identified as S-53. (Constructed in 1996 ~~and modified in 2002~~)
- (e) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewell furnace, identified as Sidewell Furnace #5 with a combined total maximum throughput of 6,000 pounds of clean aluminum/ingots and aluminum scrap per hour. Sidewell Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 processes aluminum/ingots and exhausts to one (1) stack, identified as S-54, with emissions uncontrolled. Sidewell #5 processes aluminum scrap, and is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996 ~~and modified in 2002~~)

SECTION D.2

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (d) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, with a maximum throughput capacity of 6,000 pounds of aluminum per hour, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 EF, exhausting to one (1) stack, identified as S-53. (Constructed in 1996 ~~and modified in 2002~~)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (e) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewall furnace, identified as Sidewall Furnace #5 and a total maximum throughput of 6,000 pounds of clean aluminum/ingots and aluminum scrap per hour. Sidewall Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 processes clean aluminum/ingots and exhausts to one (1) stack, identified as S-54, with emissions uncontrolled. Sidewall #5 processes aluminum scrap, and is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996 and modified in 2002)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

3. The emissions from the fluxing process occurred in Melt Furnace #5 was not addressed in the TSD. Upon further review, IDEM, OAQ has decided the following information shall be documented:

Melt Furnace 5 is cleaned once per day and the flux input is 60 lbs/day. The Permittee has shown that the flux used at this source has been changed and does not contain any chloride. Therefore, there is no HCl emitted from the fluxing process. The PM/PM10 emissions from the fluxing process are included in the stack testing result. In addition, the Permittee has stated that the flux usage for Melt Furnace #5 remains the same after this source modification. No changes have been made to the TSD because the IDEM, OAQ prefers that the TSD reflect the permit as it was on public notice.

4. For clarification purpose, IDEM, OAQ has determined to made the following changes:

D.2.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63.1511 and 40 CFR 63.1512]

- (a) Within 180 days after the issuance of permit #069-7421-00031, **issued on April 16, 2002**, in order to demonstrate compliance with Condition D.2.3, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.

D.3.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63.1511 and 40 CFR 63.1512]

- (a) Within 180 days after the issuance of permit #069-7421-00031, **issued on April 16, 2002**, in order to demonstrate compliance with Condition D.3.2, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C - Performance Testing.

5. In reviewing the TSD and the permit after public notice, IDEM, OAQ has decided that it is important to further clarify the changes that the source is making.

When the source's Title V permit (T069-7421-00031, issued April 16, 2002) was prepared, the maximum capacity for the chip conveyor, which is an enclosed pneumatic conveyor, between the dryer and Furnace #5 was 3,600 lbs/hr. The dryer has a maximum capacity of 6,000 lbs/hr, but only 3,600 lbs/hr of chips could be processed because of the capacity limit of the chip conveyor. Therefore, the dryer was permitted at 3,600 lbs/hr although there was a condition labeled an "Alternative Operating Scenario" that allowed the chip dryer to process at 6,000 lbs/hr when there was a backlog of chips.

Furnace #5 was described in the Title V permit as having a maximum throughput of 4,500 lbs/hr of clean aluminum and a maximum throughput of 1,500 lbs/hr of in-house aluminum scrap. The 1,500 lbs/hr of scrap would be melted in the sidewell and the 4,500 lbs/hr would be melted in the melt furnace.

The source recently discovered that the chip conveyor can handle more than 6,000 lbs/hr of chips and will allow each of the dryer to operate at the full capacities of 6,000 lbs/hr. In this modification, the source wanted to increase their flexibility and have the description of furnace #5 be changed so that they could process up to 6,000 lbs/hr of clean aluminum or in-house aluminum scrap in any combination, and that it could be melted up 6,000 lbs/hr in the sidewell of furnace #5, or in the melt section of furnace #5.

The total maximum capacity of 6,000 lbs/hr of Furnace #5 has not increased since the furnace was installed. Therefore, no additional melted aluminum will be produced. There will be no increase in utilization of the holding furnaces or the paint booth since no additional product is being made. The uncontrolled total PTE of VOC from the Furnace and chip dryer is less than 15 tons/yr. Therefore, VOC is less than the PSD significant modification level and a limit is not necessary.

Indiana Department of Environmental Management Office of Air Quality

Technical Support Document (TSD) for a Part 70 Significant Source Modification and a Significant Permit Modification

Source Background and Description

Source Name:	Hayes-Lemmerz International, Inc.
Source Location:	1870 Riverfork Drive, Huntington, Indiana 46750
County:	Huntington
SIC Code:	3714
Operation Permit No.:	T069-7421-00031
Operation Permit Issuance Date:	April 16, 2002
Significant Source Modification No.:	069-16113-00031
Significant Permit Modification No.:	069-15926-00031
Permit Reviewer:	ERG/YC

History

On June 11, 2002, Hayes-Lemmerz International, Inc. submitted an application to the OAQ requesting to increase the throughput rate of the existing chip dryer and the melt furnace #5, which were permitted in the source's Title V permit #069-7421-00031, issued April 16, 2002. The proposed modification includes the following:

- (a) The chip dryer has a maximum capacity of 6,000 pounds of aluminum chip scrap per hour, but was described as a unit operating at a maximum throughput rate of 3,600 pounds of chips per hour as an alternate operating scenario due to the throughput limit on the chip handling process in Title V permit #069-7421-00031, issued April 16, 2002. However, the Title V permit did not have any throughput limit on this chip dryer.

The source stated that the maximum throughput rate of 3,600 lbs/hr chips for the chip handling process is incorrect and requested to have the flexibility to operate this chip dryer at the full capacity of 6,000 pounds of chips per hour. The chip handling system has a maximum throughput rate greater than 6,000 lbs/hr and is an enclosed pneumatic conveyor. Therefore, no particulate emissions are emitted from this chip handling process.

- (b) Melt Furnace #5 has a maximum capacity of 6,000 pounds of aluminum input per hour and was described as a unit with a capacity of 4,500 pounds of clean aluminum/ingots input per hour and 1,500 pounds of in-house process aluminum scrap (wheels or chips) input per hour in Title V permit #069-7421-00031, issued April 16, 2002. The aluminum scrap was processed in Sidewell Furnace #5 and the exhaust from Sidewell Furnace #5 is vented to stack S53, which is controlled by a multicyclone. The Title V permit did not have any throughput limit on pounds of clean aluminum or scrap that can be processed in this furnace.

The source requested the flexibility on the amount of clean aluminum/ingots or aluminum scrap input to the furnace. The maximum capacity of the total aluminum input to Melt Furnace #5 remains 6,000 pounds per hour.

These modifications do not require any physical changes to the facilities, but are considered a change in the method of operation. In addition, these units were permitted under alternative operating scenarios, instead of the maximum design capacities for the chip dryer and Melt Furnace #5. Therefore, this modification will result in increasing the potential to emit of these units and a Part 70 Source Modification is required to perform this modification, pursuant to 326 IAC 2-7-10.5.

The existing source is a PSD major source before this modification. The Permittee has indicated that all other emission units were permitted at their maximum capacities and no change will be made for other existing units. Therefore, these modifications will not result in debottlenecking or increased utilization of other existing units.

Summary of Modification

The Office of Air Quality (OAQ) has reviewed a modification application from Hayes-Lemmerz International, Inc. relating to the modification of the following existing emission units and pollution control devices:

- (a) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 EF, exhausting to one (1) stack, identified as S-53. (Constructed in 1996 and modified in 2002)

The maximum throughput capacity of this dryer is increased from 3,600 lbs/hr to 6,000 lbs/hr.

- (b) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewell furnace, identified as Sidewell Furnace #5 with a combined total maximum throughput of 6,000 pounds of clean aluminum/ingots and aluminum scrap per hour. Sidewell Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 processes aluminum/ingots and exhausts to one (1) stack, identified as S-54, with emissions uncontrolled. Sidewell #5 processes aluminum scrap is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996 and modified in 2002)

Melt Furnace #5 was described as a unit with a capacity of 4,500 pounds of clean aluminum/ingots input per hour, and Sidewell Furnace #5 was described as a unit with a capacity of 1,500 pounds of in-house process aluminum scrap (wheels or chips) in the Title V permit #069-7421-00031, issued April 16, 2002. The Permittee requested the flexibility on the amount of clean aluminum/ingots or aluminum scrap that could be fed to Sidewell Furnace #5 and Melt Furnace #5. The maximum capacity of the aluminum input to both Melt Furnace #5 and Sidewell Furnace #5 remains 6,000 pounds per hour.

Enforcement Issue

There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the Part 70 Significant Source Modification and Significant Permit Modification be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on June 11, 2002. Additional information was received on July 22, 2002, and August 30, 2002.

Emission Calculations

See Appendix A of this document for detailed emissions calculations (pages 1 through 2.)

Potential To Emit of Modification

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U. S. EPA."

This table reflects the PTE before controls. Control equipment is not considered federally enforceable until it has been required in a federally enforceable permit.

Pollutant	*Potential To Emit (tons/year)
PM	75.9
PM-10	75.9
SO ₂	0.06
VOC	13.2
CO	8.91
NO _x	10.6

*Note: This is the uncontrolled potential to emit of the chip dryer and the melt furnace #5 after modification.

Justification for Modification

This modification is being performed through a Part 70 Significant Source Modification pursuant to 326 IAC 2-7-10.5(f)(4) as the changes are considered changes in operation methods and the potential to emit PM and PM10 before control of these modified units are greater than 25 tons per year each. The permit modification is being performed through Significant Permit Modification pursuant to 326 IAC 2-7-12(d) because this is a modification under a provision of Title I of the CAA.

County Attainment Status

The source is located in Huntington County.

Pollutant	Status
PM-10	Attainment
SO ₂	Attainment
NO ₂	Attainment

Ozone	Attainment
CO	Attainment
Lead	Attainment

- (a) Volatile organic compounds (VOC) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Huntington County has been designated as attainment or unclassifiable for ozone. Therefore, VOC emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (b) Huntington County has been classified as attainment or unclassifiable for all other criteria pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.
- (c) Fugitive Emissions
Since this type of operation is one of the 28 listed source categories under 326 IAC 2-2, the fugitive PM emissions are counted toward determination of PSD and Emission Offset applicability.

Source Status

Existing Source PSD or Emission Offset Definition (emissions after controls, based upon 8760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (tons/year)
PM	11
PM-10	11
SO ₂	1
VOC	26
CO	27
NOx	135

- (a) This existing source is a major stationary source because an attainment regulated pollutant is emitted at a rate of 100 tons per year or more, and it is one of the 28 listed source categories.
- (b) These emissions are based upon the IDEM's emission report for Hayes and Lemmerz, International, Inc. in 2002.

Potential to Emit of Modification After Issuance

The table below summarizes the potential to emit, reflecting all limits, of the significant emission units after controls. The control equipment is considered federally enforceable only after issuance of this Part 70 source modification.

	Potential to Emit (tons/year)						
Process/facility	PM	PM-10	SO ₂	VOC	CO	NO _x	HAPs
*Thermal Chip Dryer	4.39 **less than 8.76	4.39 **less than 8.76	0.03	Less than 12	4.49	5.34	Negligible
*Melt Furnace #5	2.04 **less than 4.38	2.04 **less than 4.38	0.03	2.26 2.92	4.42	5.26	Negligible
Total emissions from the chip dryer and the melt furnace #5 after modification	less than 13.1	Less than 13.1	0.06	14.9	8.91	10.6	Negligible
PSD Thresholds	25	15	40	40	100	40	NA

Note: (*) These were the only units constructed in 1996 and the only units being modified in 2002.
(**) In order to account for the variance of stack test results, the limited potential to emit PM/PM10 is greater than the PTE calculated in Appendix A, which is based on the actual stack testing results on August 28, 1996.

This modification to an existing major stationary source is not major because the emission increase is less than the PSD significant levels. Therefore, pursuant to 326 IAC 2-2, and 40 CFR 52.21, the PSD requirements do not apply.

Federal Rule Applicability

- There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this proposed modification.
- The source does not manufacture any aluminum at this plant. Therefore, the New Source Performance Standards for primary aluminum reduction plants (40 CFR 60.190-195, Subpart S) do not apply to this source.
- The source does not manufacture any aluminum at this plant. Therefore, the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for primary aluminum reduction plants (40 CFR 63.840-859, Subpart LL) do not apply to this source.
- The thermal chip dryer and the Melt Furnace #5 (including Sidewell Furnace #5) are secondary aluminum production facilities and the entire source is a major source of HAPs. Therefore, the thermal chip dryer and the Melt Furnace #5 are subject to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) for Secondary Aluminum Production (40 CFR 63.1500-1504, Subpart RRR).

The requirements of 40 CFR 63, Subpart RRR have been applied to the chip dryer, the Melt Furnace #5, and the Sidewell Furnace #5 in the Title V permit #069-7421-00031, issued on April 16, 2002. The thermal dryer has the specific requirements as follows:

- Pursuant to 40 CFR 63.1505(c), on and after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator of a thermal chip dryer must not discharge or cause to be discharged to the atmosphere emissions in excess of:
 - 0.40 kilograms (kg) of THC, as propane, per megagram (Mg) (0.80 lb of THC, as propane, per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major source ; and

(B) 2.50 micrograms (Fg) of D/F TEQ per Mg (3.5×10^{-5} gr per ton) of feed/charge from a thermal chip dryer at a secondary aluminum production facility that is a major or area source.

(2) Pursuant to 40CFR 63.1506, on and after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator must operate the thermal chip dryer and control equipment according to the requirements in this section.

(A) Pursuant to 40 CFR 63.1506(c), the owner or operator of the thermal chip dryer with multicyclone must:

- (i) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference in 40 CFR 63.1502 of this subpart)
- (ii) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and
- (iii) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.

(B) Pursuant to 40 CFR 63.1506(d), the owner or operator of the thermal chip dryer must:

- (i) Except as provided in paragraph (C) of this section, install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and
- (ii) Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.
- (iii) The owner or operator may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:

(AA) The aluminum production weight, rather than feed/charge weight is measured and recorded for the thermal chip dryer; and

(BB) All calculations to demonstrate compliance with the emission limits for thermal chip dryer are based on aluminum production weight rather than feed/charge/weight.

(C) Pursuant to 40 CFR 63.1506(p), when a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or

usual mode of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.

Furnace #5 and Sidewell Furnace #5 have the specific requirements as follows:

- (1) Pursuant to 40 CFR 63.1505(i),
 - (A) The owner or operator of Melt Furnace #5 must use the following limits to determine the emission standards for a secondary aluminum processing unit (SAPU):
 - (i) 0.40 kg of PM per Mg (0.80 lb of PM per ton) of feed/charge
 - (ii) 15 Fg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge. This limit does not apply if the furnace processes only clean charge; and
 - (iii) 0.20 kg of HCl per Mg (0.40 lb of HCl per ton) of feed/charge
 - (iv) The owner or operator may determine the emission standards for Melt Furnace #5 by applying the limits on the basis of the aluminum production weight in each furnace, rather than on the basis of feed/charge.
 - (B) The owner or operator of Sidewell Furnace #5 (that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth) must comply with the emission limits below on the basis of the combined emissions from the sidewell and the hearth:
 - (i) 0.02 kg of HCl per Mg (0.04 lb of HCl per ton) of feed/charge
 - (ii) 0.005 kg of PM per Mg (0.01 lb of PM per ton) of feed/charge
 - (iii) 15 Fg of D/F TEQ per Mg (2.1×10^{-4} gr of D/F TEQ per ton) of feed/charge. This limit does not apply if the furnace processes only clean charge
 - (iv) The emission limits listed above do not apply to the sidewell furnaces if they use no reactive flux materials
 - (v) The owner or operator may determine the emission standards for Sidewell Furnace #5 by applying the limits on the basis of the aluminum production weight in each furnace, rather than on the basis of feed/charge.
- (2) On and after the date of approval of the operation, maintenance and monitoring (OM&M) plan, the owner or operator must comply with the emission limits calculated using the equations for PM, HCl, and D/F listed in 40 CFR 63.1505(k) for Melt Furnace #5 and Sidewell Furnace #5.

- (3) Pursuant to 40 CFR 63.1506(a), on and after the date the initial performance test is conducted or required to be conducted, whichever date is earlier, the owner or operator must operate Melt Furnace #5 and Sidewell Furnace #5 and control equipment according to the requirements in this section. The completion of the initial performance tests for Melt Furnace #5 and Sidewell Furnace #5 shall be considered to be the date of approval of the OM&M plan by the permitting authority.
- (4) The owner or operator of Melt Furnace #5 and Sidewell Furnace #5 must:
 - (A) Pursuant to 40 CFR 63.1506(b), provide and maintain easily visible labels posted at each furnace that identifies the applicable emission limits and means of compliance, including:
 - (i) The type of affected source or emission unit (e.g. group 1 furnace, sidewell furnace)
 - (ii) The applicable operational standard(s) and control method(s) (work practice or control device). This includes, but is not limited to, the type of charge to be used for a furnace (e.g., clean scrap only, all scrap, etc.), flux materials and additional practices, and the applicable operating parameter ranges and requirements as incorporated in the OM&M plan.
 - (B) Pursuant to 40 CFR 63.1506(d):
 - (i) Install and operate a device that measures and records or otherwise determine the weight of feed/charge (or throughput) for each operating cycle or time period used in the performance test; and
 - (ii) Operate each weight measurement system or other weight determination procedure in accordance with the OM&M plan.
 - (iii) The owner or operator may choose to measure and record aluminum production weight from an affected source or emission unit rather than feed/charge weight to an affected source or emission unit, provided that:
 - (AA) The aluminum production weight, rather than feed/charge weight is measured and recorded for all emission units; and
 - (BB) All calculations to demonstrate compliance with the emission limits are based on aluminum production weight rather than feed/charge/weight.
 - (C) Pursuant to 40 CFR 63.1506(p), When a process parameter or add-on air pollution control device operating parameter deviates from the value or range established during the performance test and incorporated in the OM&M plan, the owner or operator must initiate corrective action. Corrective action must restore operation of the affected source or emission unit (including the process or control device) to its normal or usual mode of operation as expeditiously as practicable in accordance with good air pollution practices for minimizing emissions. Corrective actions taken must include follow-up actions necessary to return the process or control device parameter level(s) to the value or range of

values established during the performance test and steps to prevent the likely recurrence of the cause of a deviation.

- (5) Pursuant to 40 CFR 63.1506(n), the owner or operator of Melt Furnace #5 must:
 - (A) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
 - (B) Operate each furnace in accordance with the work practice/pollution prevention measures documented in the OM&M plan and within the parameter values or ranges established in the OM&M plan.
 - (C) Operate each furnace using only clean charge as the feedstock.
- (6) Pursuant to 40 CFR 63.1506(c), the owner or operator of Sidewell Furnace #5 must:
 - (A) Design and install a system for the capture and collection of emissions to meet the engineering standards for minimum exhaust rates as published by the American Conference of Governmental Industrial Hygienists in chapters 3 and 5 of "Industrial Ventilation: A Manual of Recommended Practice" (incorporated by reference in 40 CFR 63.1502 of this subpart)
 - (B) Vent captured emissions through a closed system, except that dilution air may be added to emission streams for the purpose of controlling temperature at the inlet to a fabric filter; and
 - (C) Operate each capture/collection system according to the procedures and requirements in the OM&M plan.
- (7) Pursuant to 40 CFR 63.1506(m)(6), the owner or operator of Sidewell Furnace #5 must:
 - (A) Maintain the total reactive chlorine flux injection rate for each operating cycle or time period used in the performance test at or below the average rate established during the performance test.
 - (B) Operate each sidewell furnace such that:
 - (i) The level of molten metal remains above the top of the passage between the sidewell and hearth during reactive flux injection, unless the hearth also is equipped with an add-on control device.
 - (ii) Reactive flux is added only in the sidewell unless the hearth is also equipped with an add-on control device.

State Rule Applicability - The Thermal Chip Dryer

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is a PSD major source. In order for this project to be a PSD minor modification, the following requirements are necessary for the thermal chip dryer:

- (a) The PM emissions from stack S-53 for the thermal chip dryer shall not exceed 2.0 lbs/hr. This is based on the emission rate of 0.67 lbs/ton of chips processed and is equivalent

to 8.76 tons per year of PM emissions. Combined with the PM emissions from the melt furnace #5, the PM emissions from this modification project are limited to less than 25 tons per year.

- (b) The PM₁₀ emissions from stack S-53 for the thermal chip dryer shall not exceed 2.0 lbs/hr. This is based on the emission rate of 0.67 lbs/ton of chips processed and is equivalent to 8.76 tons per year of PM₁₀ emissions. Combined with the PM₁₀ emissions from the melt furnace #5, the PM₁₀ emissions from this modification project are limited to less than 15 tons per year.

Therefore, the requirements of 326 IAC 2-2 are not applicable. The use of the multicyclone with 90% efficiency ensures compliance with these limits (see Appendix A).

326 IAC 8-1-6 (General Reduction Requirements for New Facilities)

Pursuant to CP #069-4665-00031, issued on October 26, 1995, the total coolant input on the aluminum chips fed to the natural gas fired chip dryer shall not exceed 54 pounds per hour, which is equivalent to less than 12 tons of VOC per twelve (12) consecutive month period. Since the VOC emissions were limited to less than 25 tons per year, the requirements of 326 IAC 8-1-6 are not applicable. The maximum coolant usage of 54 lbs/hr was calculated assuming the coolant usage equals 1.5% by weight of the chip processed (3,600 lbs/hr x 1.5% = 54 lbs/hr).

This modification will increase the throughput rate the chip dryer from 3,600 lbs/hr to 6,000 lbs/hr. Therefore, the total coolant input will be adjusted to 90 lbs/hr (6,000 lbs/hr x 1.5% = 90 lbs/hr). According to the stack test conducted on August 27, 1996 and the emission calculations in Appendix A, the VOC emissions from the stack S53 for the thermal chip dryer will be 10.3 tons/yr when operating at a maximum throughput rate of 6,000 pounds of chips per hour. Therefore, this thermal chip dryer is still in compliance with this VOC emission limit of 12 tons/yr.

326 IAC 6-3-2 (Manufacturing Processes)

Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from the thermal chip dryer shall not exceed 8.56 lbs/hr when the process weight rate is 6,000 lbs/hr.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

According to the emission calculations (see Appendix A), the potential to emit PM after control from the thermal chip dryer is less than the limit above. Therefore, the thermal chip dryer is in compliance with 326 IAC 6-3-2. The use of the multicyclone with 90% efficiency ensures compliance with this limit.

State Rule Applicability - Melt Furnace #5 & Sidewell Furnace #5

326 IAC 2-2 (Prevention of Significant Deterioration)

This source is a PSD major source. In order for this project to be a PSD minor modification, the following requirements are necessary for the melt furnace #5:

- (a) The PM emissions from stack S-54 for the melt furnace #5 shall not exceed 1.0 lbs/hr. This is equivalent to 4.38 tons per year of PM emissions. Combined with the PM emissions from the thermal chip dryer, the PM emissions from this modification project are limited to less than 25 tons per year.

- (b) The PM10 emissions from stack S-54 for the melt furnace #5 shall not exceed 1.0 lbs/hr. This is equivalent to 4.38 tons per year of PM10 emissions. Combined with the PM10 emissions from the thermal chip dryer, the PM10 emissions from this modification project are limited to less than 15 tons per year.

Therefore, the requirements of 326 IAC 2-2 are not applicable.

326 IAC 6-3-2 (Manufacturing Processes)

Pursuant to 326 IAC 6-3-2(e), the allowable particulate emissions from each of Melt Furnace #5 and Sidewell Furnace #5 shall not exceed 8.56 lbs/hr when the process weight rate is 6,000 lbs/hr.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

Melt Furnace #5 and Sidewell Furnace #5 have a total maximum capacity of 6,000 pounds aluminum per hour. The exhaust of Sidewell Furnace #5 is directed to stack S53, which is connected to the thermal chip dryer and equipped with a multicyclone. Melt Furnace #5 vents through stack S54 and is not equipped with any control device. Therefore, the worst case scenario is when all 6,000 pounds of aluminum is input to Melt Furnace #5 and the exhaust is directed to stack S54. According to the emission calculations (see Appendix A), the potential to emit PM before control from the Melt Furnace #5 is less than the limit above. Therefore, Melt Furnace #5 and Sidewell Furnace #5 are in compliance with 326 IAC 6-3-2.

Compliance Requirements

Permits issued under 326 IAC 2-7 are required to ensure that sources can demonstrate compliance with applicable state and federal rules on a more or less continuous basis. All state and federal rules contain compliance provisions, however, these provisions do not always fulfill the requirement for a more or less continuous demonstration. When this occurs IDEM, OAQ, in conjunction with the source, must develop specific conditions to satisfy 326 IAC 2-7-5. As a result, compliance requirements are divided into two sections: Compliance Determination Requirements and Compliance Monitoring Requirements.

Compliance Determination Requirements in Section D of the permit are those conditions that are found more or less directly within state and federal rules and the violation of which serves as grounds for enforcement action. If these conditions are not sufficient to demonstrate continuous compliance, they will be supplemented with Compliance Monitoring Requirements, also Section D of the permit. Unlike Compliance Determination Requirements, failure to meet Compliance Monitoring conditions would serve as a trigger for corrective actions and not grounds for enforcement action. However, a violation in relation to a compliance monitoring condition will arise through a source's failure to take the appropriate corrective actions within a specific time period.

The compliance monitoring requirements applicable to this modification are the same as those in the source's Title V permit. These monitoring conditions are as follows:

- (1) The thermal chip dryer has applicable compliance monitoring conditions as specified below:
- (a) Visible emissions notations of the stack exhaust (S53) from the thermal chip dryer shall be performed once per shift during normal daylight operations. A

trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.

- (b) The Permittee shall record the total static pressure drop across the multicyclone at least once per shift when the thermal chip dryer is in operation. Unless operated under conditions for which the Compliance Response Plan specifies otherwise, the pressure drop across the cyclone shall be maintained within the range of 3.6 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.
- (c) An inspection shall be performed within the last month of each calendar quarter of the multicyclone controlling the thermal chip dryer. In the event that multicyclone failure has been observed, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

These monitoring conditions are necessary because the multicyclone used to control PM/PM10 emissions from the thermal chip dryer must operate properly to ensure compliance with 326 IAC 6-3 (Manufacturing Processes) and 40 CFR 63, Subpart RRR.

- (2) The Melt Furnace #5 and Sidewell Furnace #5 have applicable compliance monitoring conditions as specified below:
 - (a) Visible emissions notations of the Melt Furnace #5 stack exhaust (S54) and the Sidewell Furnace #5 stack exhaust (S53) shall be performed once per shift during normal daylight operations. A trained employee will record whether emissions are normal or abnormal. For processes operated continuously "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time. In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions. A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed.
 - (b) The Permittee shall record the total static pressure drop across the multicyclone at least once per shift when Sidewell Furnace #5 is in operation. Unless operated under conditions for which the Compliance Response Plan specifies

otherwise, the pressure drop across the cyclone shall be maintained within the range of 3.6 to 6.0 inches of water or a range established during the latest stack test. The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when the pressure reading is outside of the above mentioned range for any one reading.

- (c) An inspection shall be performed within the last month of each calendar quarter of the multicyclone controlling Sidewell Furnace #5. In the event that multicyclone failure has been observed, failed units and the associated process will be shut down immediately until the failed units have been repaired or replaced. Operations may continue only if the event qualifies as an emergency and the Permittee satisfies the requirements of the emergency provisions of this permit (Section B - Emergency Provisions). Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

These monitoring conditions are necessary because Melt Furnace #5 and the multicyclone used to control PM/PM10 emissions from Sidewell Furnace #5 must operate properly to ensure compliance with 326 IAC 6-3 (Manufacturing Processes) and 40 CFR 63, Subpart RRR.

Proposed Changes

A.1 General Information [326 IAC 2-7-4(c)] [326 IAC 2-7-5(15)] [326 IAC 2-7-1(22)]

The Permittee owns and operates a stationary operation that manufactures aluminum wheels for automobiles and light trucks.

Responsible Official:	Rick Guernsey
Source Address:	1870 Riverfork Drive, Huntington, Indiana 46750
Mailing Address:	1870 Riverfork Drive, Huntington, Indiana 46750
General Source Phone Number:	(219) 356-7001
SIC Code:	3714
County Location:	Huntington
County Status:	Attainment for all criteria pollutants
Source Status:	Part 70 Permit Program
	Major Minor Source, under PSD;
	Major Source, Section 112 of the Clean Air Act
	1 of 28 Source Categories

A.2 Emission Units and Pollution Control Equipment Summary [326 IAC 2-7-4(c)(3)] [326 IAC 2-7-5(15)]

- (d) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, with a maximum throughput capacity of ~~3600~~ **6,000** pounds of aluminum per hour, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 EF, exhausting to one (1) stack, identified as S-53. (Constructed in 1996 **and modified in 2002**)
- (e) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewell furnace, identified as Sidewell Furnace #5 with a combined total maximum throughput of 6000 pounds of **aluminum clean aluminum/ingot and aluminum scrap** per hour. Sidewell Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 ~~has a maximum throughput of 4500 pounds of clean processes~~ **aluminum/ingots per hour** and exhausts to one (1)

stack, identified as S-54, with emissions uncontrolled. Sidewell #5 ~~has a maximum throughput of 1500 pounds of in-house process~~ **processes** aluminum scrap per hour, **and** is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996 **and modified in 2002**)

SECTION D.2 FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]:

- (a) One (1) 5.2 million Btu per hour natural gas fired thermal chip dryer, with a maximum throughput capacity of ~~3600~~ **6,000** pounds of aluminum per hour, vented to an afterburner furnace (used as fire prevention and not as continuous emissions control), which has a maximum heat input capacity of 7 million Btu per hour, equipped with a chip hopper that is vented to a multicyclone for particulate matter control. The dryer will process in house process scrap/aluminum chips and operate at a temperature of 800 EF, exhausting to one (1) stack, identified as S-53. (Constructed in 1996 **and modified in 2002**)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.2.1 General Reduction Requirements for New Facilities and Prevention of Significant Deterioration [326 IAC 8-1-6] [326 IAC 2-2] [40 CFR 52.21]

Pursuant to CP No. 069-4665-00031, issued on October 26, 1995 **and 326 IAC 8-1-6**, the input coolant on the aluminum chips to the chip dryer shall be limited to ~~5490~~ pounds per hour **assuming that the coolant usage equals 1.5% by weight of the chip processed**. This production limitation is equivalent to twelve (12) tons of VOC per twelve (12) consecutive month period. This usage limit is required to limit the potential to emit of VOCs to less than 25 tons per twelve (12) consecutive month period. Compliance with this limit makes 326 IAC 8-1-6 and also 326 IAC 2-2 (Prevention of Significant deterioration) not applicable.

D.2.4 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) The PM emissions from stack S-53 for the thermal chip dryer shall not exceed 2.0 lbs/hr. This is based on the emission rate of 0.67 lbs/ton of chips processed and is equivalent to 8.76 tons per year of PM emissions.
- (b) The PM10 emissions from stack S-53 for the thermal chip dryer shall not exceed 2.0 lbs/hr. This is based on the emission rate of 0.67 lbs/ton of chips processed and is equivalent to 8.76 tons per year of PM10 emissions.

Combined with the emissions from stack S-54 for the melt furnace #5, the emissions from both stack S-53 for the thermal chip dryer and stack S-54 for the melt furnace #5 are limited to less than 25 tons per year of PM emissions and less than 15 tons per year of PM10 emissions. Therefore, the requirements of 326 IAC 2-2 are not applicable.

D.2.45 Particulate Matter (PM) [326 IAC 6-3-2]

Pursuant to CP No. ~~069-4665-00031~~, issued on October 26, 1995 **and 326 IAC 6-3-2(e)**, the allowable PM **particulate** emissions from the thermal chip dryer shall not exceed ~~6-08~~ **8.56** pounds per hour when operating at a process weight rate of ~~4-8 tons~~ **6,000 pounds** per hour.

The pounds per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to 60,000 pounds per hour shall be accomplished by use of the equation:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour; and

P = process weight rate in tons per hour

D.2.56 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for the thermal chip dryer and the multicyclone.

D.2.6 Alternative Operating Scenario

~~The thermal chip dryer is allowed a maximum throughput capacity of 6000 pounds per hour, even though the maximum design throughput capacity of the pneumatic chip handling system being conveyed to the melt furnaces is only 3600 pounds per hour. This is to account for times when there is a surplus of chips that have already been dried and are backlogged, but have not been fed to the melt furnaces.~~

D.2.7 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63.1511 and 40 CFR 63.1512]

- (a) Within 180 days after the issuance of this permit **#069-7421-00031**, in order to demonstrate compliance with Condition D.2.3, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.
- (b) **Within 180 days after the issuance of permit #069-16113-00031, in order to demonstrate compliance with Condition D.2.4, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensable PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.**
- (bc) The owner or operator of a thermal chip dryer is subject to the performance test/compliance demonstration general requirements and procedures as listed in 40 CFR 63.1511.
- (ed) Pursuant to 40 CFR 63.1512(b), the owner or operator of a thermal chip dryer must conduct a performance test to measure THC and D/F emissions at the outlet of the control device while the unit processes only unpainted aluminum chips.
- (de) Pursuant to 40 CFR 63.1512(k), the owner or operator of a thermal chip dryer subject to an emission limit in a kg/Mg (lb/ton) of feed/charge format must measure (or otherwise determine) and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight. An owner or operator that chooses to demonstrate compliance on the basis of the aluminum production weight must measure the weight of aluminum produced by the thermal chip dryer instead of the feed/charge weight.
- (ef) Pursuant to 40 CFR 63.1512(s), the owner or operator of a thermal chip dryer/multicyclone must submit the information described in 40 CFR 63.1515(b)(2) as part of the notification of compliance status report to document compliance with the operational standard in 40 CFR 63.1506(c).

SECTION D.3

FACILITY OPERATION CONDITIONS

Facility Description [326 IAC 2-7-5(15)]

- (a) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #5, with an associated sidewell furnace, identified as Sidewell Furnace #5 and a total maximum throughput of 6000 pounds of ~~aluminum~~ **clean aluminum/ingots and aluminum scrap** per hour. Sidewell Furnace #5 is permitted to melt in-house process aluminum scrap. Melt Furnace #5 ~~has a maximum throughput of 4500 pounds of processes~~ **processes** clean aluminum/ingots ~~per hour~~ and exhausts to one (1) stack, identified as S-54, with emissions uncontrolled. Sidewell #5 ~~has a maximum throughput of 1500 pounds of in-house process~~ **processes** aluminum scrap ~~per hour~~, is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1996 **and modified in 2002**)
- (b) One (1) 12 million Btu per hour natural gas fired reverberatory furnace, identified as Melt Furnace #4, with an associated sidewell furnace, identified as Sidewell Furnace #4 and a total maximum throughput of 6000 pounds of aluminum per hour. Sidewell Furnace #4 is permitted to melt in-house process aluminum scrap (and may only do so as a backup for periods when Melt Furnace #5 is not operational in the event of breakdown or failure). Melt Furnace #4 has a maximum throughput of 4500 pounds of clean aluminum per hour and exhausts to one (1) stack, identified as S-43, with emissions uncontrolled. Sidewell #4 has a maximum throughput of 1500 pounds of in-house aluminum scrap ~~per hour~~, **and** is equipped with a multicyclone as control, and exhausts to one (1) stack, identified as S-53. (Constructed in 1994 **and modified in 2002**)

(The information describing the process contained in this facility description box is descriptive information and does not constitute enforceable conditions.)

D.3.1 PSD Minor Limit [326 IAC 2-2] [40 CFR 52.21]

- (a) The PM emissions from stack S-54 for the melt furnace #5 shall not exceed 1.0 lbs/hr. This is based on the emission rate of 0.33 lbs/ton of aluminum processed and is equivalent to 4.38 tons per year of PM emissions.
- (b) The PM10 emissions from stack S-54 for the melt furnace #5 shall not exceed 1.0 lbs/hr. This is based on the emission rate of 0.33 lbs/ton of aluminum processed and is equivalent to 4.38 tons per year of PM10 emissions.

Combined with the emissions from stack S-53 for the thermal chip dryer, the emissions from both stack S-53 for the thermal chip dryer and stack S-54 for the melt furnace #5 are limited to less than 25 tons per year of PM emissions and less than 15 tons per year of PM10 emissions. Therefore, the requirements of 326 IAC 2-2 are not applicable.

D.3.42 Particulate Matter (PM) [326 IAC 6-3-2]

- (a) Pursuant to GP No. 069-4665-00031, issued on October 26, 1995, (A069-5245-00031, issued on February 9, 1996) and 326 IAC 6-3-2(e), the allowable PM **particulate** emissions from Melt Furnace #5 shall not exceed ~~6.52~~ **8.56** pounds per hour when operating at a process weight rate of ~~2.00 tons~~ **6,000 pounds** per hour. Pursuant to 326 IAC 6-3-2, the allowable PM **particulate** emissions from Melt Furnace #4 shall not exceed 6.52 pounds per hour when operating at a process weight rate of 2.00 tons per hour. The pound per hour limitation was calculated with the following equation:

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67}$$

where E = rate of emission in pounds per hour and
P = process weight rate in tons per hour

- (b) Pursuant to ~~GP No. 069-4665-00031, issued on October 26, 1995, (A069-5245-00031, issued on February 9, 1996)~~ and 326 IAC 6-3 ~~6-3-2(e)~~, the allowable **PM particulate** emissions from Sidewell Furnace #5 shall not exceed ~~3.38~~ **8.56** pounds per hour when operating at a process weight rate of ~~0.75 tons~~ **6,000 pounds** per hour. Pursuant to 326 IAC 6-3, the allowable **PM particulate** emissions from Sidewell Furnace #4 shall not exceed 3.38 pounds per hour when operating at a process weight rate of 0.75 tons per hour. The pound per hour limitation was calculated with the following equation.

Interpolation of the data for the process weight rate up to sixty thousand (60,000) pounds per hour:

$$E = 4.10 P^{0.67} \quad \text{where } E = \text{rate of emission in pounds per hour and} \\ P = \text{process weight rate in tons per hour}$$

D.3.23 General Provisions Relating to NESHAP [326 IAC 20-1][40 CFR Part 63, Subpart A]

The provisions of 40 CFR Part 63, Subpart A - General Provisions, which are incorporated by reference in 326 IAC 20-1, apply to the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, except when otherwise specified in 40 CFR Part 63, Subpart RRR.

D.3.34 Emission Standards and Operating Requirements [40 CFR 63.1505, 40 CFR 63.1506, Subpart RRR]

- (a) Pursuant to 40 CFR 63.1505(i),

D.3.45 Preventive Maintenance Plan [326 IAC 2-7-5(13)]

A Preventive Maintenance Plan, in accordance with Section B - Preventive Maintenance Plan, of this permit, is required for Sidewell Furnace #4 and Sidewell Furnace #5 and the multicyclone.

D.3.56 Alternative Operating Scenario

Sidewell Furnace #4 is allowed to melt in-house process aluminum scrap, ~~at the same listed capacities as Sidewell Furnace #5--only~~ as a backup for periods when Melt Furnace #5/Sidewell Furnace #5 is not operational due to breakdown or failure.

Compliance Determination Requirements

D.3.67 Testing Requirements [326 IAC 2-7-6(1),(6)] [326 IAC 2-1.1-11] [40 CFR 63.1511 and 40 CFR 63.1512]

- (a) Within 180 days after the issuance of this permit ~~#069-7421-00031~~, in order to demonstrate compliance with Condition ~~D.3.1~~ **D.3.2**, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.
- (b) **Within 180 days after the issuance of permit #069-16113-00031, in order to demonstrate compliance with Condition D.3.1, the Permittee shall perform PM and PM-10 testing utilizing methods as approved by the Commissioner. This test shall be repeated at least once every five (5) years from the date of this valid compliance demonstration. PM-10 includes filterable and condensible PM-10. Testing shall be conducted in accordance with Section C- Performance Testing.**
- (bc) The owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 is subject to the performance test/compliance demonstration general requirements and procedures as listed in 40 CFR 63.1511.

- (ed) Pursuant to 40 CFR 63.1512(d)(4), the owner or operator of Sidewell Furnace #4 and Sidewell Furnace #5 that conducts reactive fluxing (except for cover flux) in the hearth, or that conducts reactive fluxing in the sidewell at times when the level of molten metal falls below the top of the passage between the sidewell and the hearth, must conduct performance tests to measure emissions of PM and D/F at the outlet of the control device and emissions of HCl at the outlet (for the emission limit) or the inlet and the outlet (for the percent reduction standard).
- (de) Pursuant to 40 CFR 63.1512(e) and the site specific monitoring plan required by 40 CFR 63.1510(o), the owner or operator of Melt Furnace #4 and Melt Furnace #5 must include data and information demonstrating compliance with the applicable emission limits below:
- (1) If Melt Furnace #4 and/or Melt Furnace #5 processes material other than clean charge, the owner or operator must conduct emission tests to measure emissions of PM, HCl, and D/F at the furnace exhaust outlet.
 - (2) If Melt Furnace #4 and/or Melt Furnace #5 processes only clean charge, the owner or operator must conduct emission tests to simultaneously measure emissions of PM and HCl at the furnace exhaust outlet. A D/F test is not required. Each test must be conducted while the melt furnaces process only clean charge.
 - (3) The owner or operator may choose to determine the rate of reactive flux added to the melt furnaces and assume, for the purposes of demonstrating compliance with the emission limits, that all reactive flux added to the melt furnaces is emitted. Under these circumstances, the owner or operator is not required to conduct an emission test for HCl.
- (ef) Pursuant to 40 CFR 63.1512(j), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must conduct performance tests as described in this section. The results of the performance tests are used to establish emission rates in lb/ton of feed/charge for PM and HCl and Fg TEQ/Mg of feed/charge for D/F emissions from each emission unit. These emission rates are used for compliance monitoring in the calculation of the 3-day, 24-hour rolling average emission rates using the equation in 40 CFR 63.1510(t). A performance test is required for each group 1 furnace processing only clean charge to measure emissions of PM and/or each group 1 furnace that processes scrap other than clean charge to measure emissions of PM and D/F and either::
- (1) Emissions of HCl (for the emission limit) or
 - (2) The mass flow rate of HCl at the inlet to and outlet from the control device (for the percent reduction standard)
- (fg) Pursuant to 40 CFR 63.1512(k), during the emission test(s) conducted to determine compliance with emission limits in a kg/Mg (lb/ton) format, the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, subject to an emission limit in a kg/Mg (lb/ton) of feed/charge format must measure (or otherwise determine) and record the total weight of feed/charge to the affected source or emission unit for each of the three test runs and calculate and record the total weight. An owner or operator that chooses to demonstrate compliance on the basis of the aluminum production weight must measure the weight of aluminum produced by the thermal chip dryer instead of the feed/charge weight.
- (gh) Pursuant to 40 CFR 63.1512(o), the owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5, must use these procedures to

establish an operating parameter value or range for the total reactive chlorine flux injection rate.

- (1) Continuously measure and record the weight of gaseous or liquid reactive flux injected for each 15 minute period during the HCl and D/F tests, determine and record the 15-minute block average weights, and calculate and record the total weight of the gaseous or liquid reactive flux for the 3 test runs;
- (2) Record the identity, composition, and total weight of each addition of solid reactive flux for the 3 test runs;
- (3) Determine the total reactive chlorine flux injection rate by adding the recorded measurement of the total weight of chlorine in the gaseous or liquid reactive flux injected and the total weight of chlorine in the solid reactive flux using the following equation:

$$W_t = F_1 W_1 + F_2 W_2$$

Where,

W_t = total chlorine usage, by weight

F_1 = fraction of gaseous or liquid flux that is chlorine

W_1 = weight of reactive flux gas injected;

F_2 = fraction of solid reactive chloride flux that is chlorine
(e.g., $F = 0.75$ for magnesium chloride); and

W_2 = weight of solid reactive flux;

- (4) Divide the weight of total chlorine usage (W_t) for the 3 test runs; and
 - (5) If a solid reactive flux other than magnesium chloride is used, the owner or operator must derive the appropriate proportion factor subject to approval by IDEM, OAQ.
- (hi) Pursuant to 40 CFR 63.1512(s), the owner or operator of Sidewell Furnace #4 and/or Sidewell Furnace #5 and the multicyclone must submit the information described in 40 CFR 63.1515(b)(2) as part of the notification of compliance status report to document compliance with the operational standard in 40 CFR 63.1506(c).

D.3.78 Particulate Matter (PM)

Pursuant to CP No. 069-4665-00031, issued on October 26, 1995, the multicyclone for PM control shall be in operation at all times when Sidewell Furnace #4 and Sidewell Furnace #5 are in operation.

D.3.89 Equations for Determining Compliance [40 CFR 63.1513]

- (a) The owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must use the equations listed in 40 CFR 63.1513 in order to determine compliance with the applicable emission limits in Condition D.3.34.
- (b) The owner or operator of Melt Furnace #4, Melt Furnace #5, Sidewell Furnace #4 and Sidewell Furnace #5 must use the equation listed in 40 CFR 63.1510(t) in order to calculate and record the 3-day, 24-hour rolling average emissions of PM, HCl, and D/F for each SAPU on a daily basis as required in Condition D.3.34(b) pursuant to 40 CFR 63.1505(k).

D.3.910 Visible Emissions Notations

D.3.1011 Parametric Monitoring

D.3.4112 Cyclone Inspections

D.3.4213 Cyclone Failure Detection

D.3.4314 Compliance Monitoring Requirements [40 CFR 63.1510, Subpart RRR]

D.3.4415 Record Keeping Requirements [40 CFR 63.10] [40 CFR 63.1517]

- (a) To document compliance with Condition D.3.910, the Permittee shall maintain records of visible emission notations of the sidewall furnaces/multicyclone stack exhaust once per shift.
- (b) To document compliance with Condition D.3.4011, the Permittee shall maintain once per shift records of the inlet and outlet differential static pressure during normal operation.
- (c) To document compliance with Condition D.3.4112, the Permittee shall maintain records of the results of the inspections required under Condition D.3.4112 and the dates the vents are redirected.
- (d) Pursuant to 40 CFR 63.1517 and to document compliance with Condition D.3.34 and D.3.4314, as required by 40 CFR 63.10(b), the owner or operator shall maintain files of all information (including all reports and notifications) required by the general provisions and this subpart.

D.3.4516 Reporting Requirements [40 CFR 63.1515] [40 CFR 63.1516]

Upon further review, the IDEM OAQ has made the following revisions to the permit:

D.2.12 Visible Emissions Notations

- (a) ~~Daily~~ **Visible** emission notations of the thermal chip dryer/multicyclone stack exhaust shall be performed **once per shift** during normal daylight operations ~~when exhausting to the atmosphere~~. A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.2.13 Parametric Monitoring

The Permittee shall record the total static pressure drop across the multicyclone used in conjunction with the thermal chip dryer, at least once per shift when the thermal chip dryer is in operation ~~when venting to the atmosphere~~. When for any one reading, the pressure drop across the ~~baghouse~~ **multicyclone** is outside the normal range of 3.0 and 6.0 inches of water or a

range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.2.14 Cyclone Inspections

An inspection shall be performed **within the last month of** each calendar quarter of the multicyclone controlling the thermal chip dryer. ~~when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.~~

D.2.17 Record Keeping Requirements [40 CFR 63.10]

(c) To document compliance with Condition D.2.13, the Permittee shall maintain ~~the following:~~ **once per shift records of the inlet and outlet differential static pressure during normal operation.**

~~(1) Once per shift records of the following operational parameters during normal operation when venting to the atmosphere:~~

~~(A) Inlet and outlet differential static pressure; and~~

~~(B) Cleaning cycle operation.~~

D.3. ~~910~~ Visible Emissions Notations

- (a) ~~Daily v~~ Visible emission notations of the sidewall furnaces/multicyclone stack exhaust shall be performed **once per shift** during normal daylight operations ~~when exhausting to the atmosphere.~~ A trained employee shall record whether emissions are normal or abnormal.
- (b) For processes operated continuously, "normal" means those conditions prevailing, or expected to prevail, eighty percent (80%) of the time the process is in operation, not counting startup or shut down time.
- (c) In the case of batch or discontinuous operations, readings shall be taken during that part of the operation that would normally be expected to cause the greatest emissions.
- (d) A trained employee is an employee who has worked at the plant at least one (1) month and has been trained in the appearance and characteristics of normal visible emissions for that specific process.
- (e) The Compliance Response Plan for this unit shall contain troubleshooting contingency and response steps for when an abnormal emission is observed. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

D.3. ~~1011~~ Parametric Monitoring

The Permittee shall record the total static pressure drop across the multicyclone used in conjunction with the sidewall furnaces, at least once per shift when Sidewall Furnace #4 and/or Sidewall Furnace #5 is in operation ~~when venting to the atmosphere.~~ When for any one

reading, the pressure drop across the ~~baghouse~~ **multicyclone** is outside the normal range of 3.0 and 6.0 inches of water or a range established during the latest stack test, the Permittee shall take reasonable response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports. A pressure reading that is outside the above mentioned range is not a deviation from this permit. Failure to take response steps in accordance with Section C - Compliance Response Plan - Preparation, Implementation, Records, and Reports, shall be considered a violation of this permit.

The instrument used for determining the pressure shall comply with Section C - Pressure Gauge and Other Instrument Specifications, of this permit, shall be subject to approval by IDEM, OAQ, and shall be calibrated at least once every six (6) months.

D.3.4112 Cyclone Inspections

An inspection shall be performed **within the last month of** each calendar quarter of the multicyclone controlling Sidewell Furnace #4 and/or Sidewell Furnace #5. ~~when venting to the atmosphere. A cyclone inspection shall be performed within three months of redirecting vents to the atmosphere and every three months thereafter. Inspections are optional when venting to the indoors.~~

D.3.4115 Record Keeping Requirements [40 CFR 63.10] [40 CFR 63.1517]

(b) To document compliance with Condition D.3.10, the Permittee shall maintain ~~the following:~~ **once per shift records of the inlet and outlet differential static pressure during normal operation.**

(1) ~~Once per shift records of the following operational parameters during normal operation when venting to the atmosphere:~~

~~(A) Inlet and outlet differential static pressure; and~~

~~(B) Cleaning cycle operation.~~

Conclusion

This proposed modification shall be subject to the conditions of the attached proposed Part 70 Significant Source Modification No. 069-16113-00031. The operation of this proposed modification shall be subject to the conditions of the proposed Part 70 Significant Permit Modification No. 069-15926-00031.

Appendix A: Emission Calculations Emissions from the Chip Dryer

Company Name: Hayes-Lemmerz International, Inc.
Address City IN Zip: 1807 Riverfork Drive, Huntington, IN 46750
SSM: 069-16113-00031
Reviewer: ERG/YC
Date: July 25, 2002

1. From the Aluminum Drying Process:

Max. Al Scrap Input	Potential Throughput			Multicyclone		
lbs/hr	tons/yr			Control Efficiency		
6000	26280.0			90% (for PM/PM10 only)		
Pollutant						
Emission Factor (lbs/ton)	PM*	PM10*	SO ₂	NO _x	VOC*	
	0.56	0.56	NA	NA	0.78	
Potential to Emit after Control (lbs/hr)	1.67	1.67	-	-	2.35	
Potential to Emit after Control (ton/yr)	7.32	7.32	-	-	10.29	
Potential to Emit before Control (ton/yr)	73.22	73.22	-	-	10.29	

Methodology

* PM/PM10 and emission factors are from the stack testing results on 08/27/96. Assume all the PM emissions are PM10 emissions.

Potential to Emit after Control (lbs/hr) = Throughput Rate (lbs/hr) x Emission Factor (lbs/ton)

Potential to Emit after Control (tons/yr) = Throughput Rate (lbs/hr) x Emission Factor (lbs/ton) x 8760 hr/yr x 1 lbs/2000ton

Potential to Emit before Control (tons/yr) = Throughput Rate (lbs/hr) x Emission Factor (lbs/ton) x 8760 hr/yr x 1 lbs/2000ton x (1-Control Efficiency)

2. From Natural Gas Combustion

Heat Input Capacity MMBtu/hr 12.2 (dryer+afterburner)	Potential Throughput MMCF/yr 106.9		Pollutant			
	PM*	PM10*	SO ₂	**NO _x	VOC*	CO
Emission Factor in lb/MMCF	-	-	0.6	100	-	84.0
Potential Emission in tons/yr	-	-	0.03	5.34	-	4.49

*PM, PM10, and VOC emissions are included in the emission calculations for the drying process because the emission factors for the drying process are based on the stack test results.

**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(AP-42 Supplement D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

3. Total emissions from the chip dryer

	Pollutant					
	PM	PM10	SO ₂	NO _x	VOC	CO
Potential to Emit before Control (tons/yr)	73.22	73.22	0.03	5.34	10.29	4.49
Potential to Emit after Control (tons/yr)	7.32	7.32	0.03	5.34	10.29	4.49

Appendix A: Emission Calculations
Emissions from the Furnace #5

Company Name: Hayes-Lemmerz International, Inc.
Address City IN Zip: 1807 Riverfork Dirve, Huntington, IN 46750
SSM: 069-16113-00031
Reviewer: ERG/YC
Date: July 25, 2002

1. From the Aluminum Smelting Process:

Aluminum Input lbs/hr	Potential Throughput tons/yr					
6000	26280.0					
	Pollutant					
Emission Factor (lbs/ton)	PM* 0.21	PM10* 0.21	SO ₂ NA	NO _x NA	VOC** 0.20	CO NA
Potential to Emit (lbs/hr)	0.62	0.62	-	-	0.60	-
Potential to Emit (ton/yr)	2.72	2.72	-	-	2.63	-

Methodology

* PM emission factor is from the stack testing results on 08/28/96. Assume all the PM emissions are PM10 emissions.

** VOC emission factor is from FIRE Version 6.23, SCC 3-04-001-03 (Aluminum Reverberatory Furnaces).

Potential to Emit after Control (lbs/hr) = Throughput Rate (lbs/hr) x Emission Factor (lbs/ton)

Potential to Emit after Control (tons/yr) = Throughput Rate (lbs/hr) x Emission Factor (lbs/ton) x 8760 hr/yr x 1 lbs/2000ton

2. From Natural Gas Combustion

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr					
12.0	105.1					
	Pollutant					
Emission Factor in lb/MMCF	PM* -	PM10* -	SO ₂ 0.6	**NO _x 100	VOC 5.5	CO 84.0
Potential Emission in tons/yr	-	-	0.03	5.26	0.29	4.42

*PM and PM10 emissions are included in the emission calculations for the smelting process because the emission factors for the smelting process are based on the stack test results.

**Emission Factors for NO_x: Uncontrolled = 100, Low NO_x Burner = 50, Low NO_x Burners/Flue gas recirculation = 32

Methodology

All Emission factors are based on normal firing.

MMBtu = 1,000,000 Btu

MMCF - 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu

Emission Factors from AP-42, Chapter 1.4, Tables 1.4-1, 1.4-2, and 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03

(AP-42 Supplement D 3/98)

Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

3. Total emissions from Furnace #5

	Pollutant					
	PM	PM10	SO ₂	NO _x	VOC	CO
Potential to Emit (tons/yr)	2.72	2.72	0.03	5.26	2.92	4.42